Saskatchewan Education

Climate for Change in Saskatchewan Schools

Saskatchewan

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THE CLIMATE FOR CHANGE

IN THE

SCHOOLS OF SASKATCHEWAN

A contract paper prepared for the Minister's Curriculum and Instruction Review Advisory Committee by Earle E. Newton Ph.D.,
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THE OPINIONS EXPRESSED
ARE THOSE OF THE AUTHOR.

Preface

The purpose of this paper is to review literature in relation to change in education and to assess the climate for change in the schools of Saskatchewan by relating the literature to selected case studies of changes in this province. The term "literature" includes research since most of the writing is based upon results of research. Priority has been given to work done in Canada since 1975 although earlier writing by prominent authorities such as M. Miles and E. Rogers is included. The paper has been written for the Curriculum and Instruction Review Advisory Committee although the possibility of adapting portions of it for other purposes will be discussed with the Chairman of the Committee. Parts I, II, and III A. of the paper have been written in a formal, documented style. Case summaries are presented in note form. The final sections are related to the literature and case studies but also include the personal view of the writer.

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PART I CHANGE IN EDUCATIONAL ORGANIZATIONS

Introduction

Most readers of this paper could list several changes that have occurred in the schools of Saskatchewan during the last twenty years. Some of the changes such as centralization of schools, the semester system and open areas are primarily organizational. The "new" math, lighthouse physical education projects, driver education, and computer literacy programs would be listed among curriculum changes. The Division System, officially adopted by this province in 1964, is an attempt to implement the concept of continuous pupil progress. The list of changes officially adopted in Saskatchewan schools is extensive and even impressive on the surface. The purpose of this paper is to look more deeply at curriculum change in the schools of Saskatchewan.

One reason for a thorough review of curriculum is that some courses are clearly outdated. In addition, there is general dissatisfaction with the Division III program. After a recent visit to a school, during which students were observed to spend an entire period copying notes on the French Revolution from the chalkboard, the writer was prompted to ask if schools had really changed at all. It is startling to realize that many experts doubt if schools have changed significantly. Common (1981) has an article entitled, "Two Decades of Curriculum Innovation and So Little Change," in the fall 1981 issue of Education Canada. Fullan (1982) makes distinctions between change and progress, between adoption and implementation, and warns that planned change attempts rarely succeed as intended. Charters and Jones (1973) assert that many intended program changes are "non-events." Sarason's (1971) conclusion is that the more

things change the more they stay the same. Dalin (1978) expresses the view that schools are created to maintain the social order and that the status quo is maintained by constant innovation. Perceptions of the current situation in schools of this province, the considered opinions of experts noted above, and the continual challenge of adapting schools to rapid changes in our society provide ample justification for thorough study of curriculum change.

It is necessary to see curriculum change within the organizational and societal context within which it occurs. Therefore, in this section of the paper sources of change will be examined, the meaning of change will be clarified, characteristics of educational organizations will be reviewed, and various perspectives on change in education will be outlined.

Sources of Change

Since the school is a social institution, it is necessary to examine social change in order to gain understanding of change in education. Sociology, a science which is devoted to discovering laws of interhuman behavior, does not include a generally accepted theory of social change. Hirsch and Zollschan (1964, p. xii) state that thinking in relation to social change has fluctuated a great deal and that, "... from the midst of all these dramatic transformations in sociology has come the admission that its theory of social change is the weakest branch of sociological theory." Paulston (1977) has placed theories of social change into two categories: equilibrium theories and conflict theories. He believes that the structural-functionist theory, in the equilibrium group, is the dominant theory on this continent. According to the structrual-functionist view, change in schools is usually of an incremental nature and is brought

about by some change in the environment external to the school which provokes an educational response. Supporters of the equilibrium concept, for example Chinoy (1954), think of schools as systems whose equilibrium is constantly being disturbed and, to a degree at least, re-established. There are also advocates of a tension-management theory who claim that changes are tension-producing as well as tension-reducing and that a system does not return to a former state of equilibrium nor create a new one (Moore, 1963). It should be noted that the latter position incorporates elements of a systems view and leads one to consider an evolutionary theory.[1.] Gaynor (1975) believes that early studies of change in rural sociology over-emphasized attitudinal aspects of change and failed to consider political and environmental variables. Political factors are stressed in the work of Baldridge and Burnham (1975) and Terreberry is a leader in the analysis of environments (Chatper 5.1 in Bennis, Benne, Chin and Corey, 1976). Change theory is still in early stages of development but it does provide some guidelines for examining the sources of change in education.

The structural-function theory of social change is based upon a belief that change is prompted by changes in the social system which provoke a response in sub-systems. Paulston (1977) has labelled these factors as "exogenous threats." Accordingly, it is necessary to look outside of the system for the source of change. Per Dalin, the founder

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1. A useful overview of various theories is provided by Rolland Paulston in Comparative Education Review, June-October, 1977. Systems models are described in Chapter 3 of The Planning of Change (Third Edition) by Bennis, Benne, Chin and Corey.

of an international organization to study change, believes that this has not typically been done. He states (1978, p. 8):

> We have failed to view the school and the educational process as part of a complex social system. We have failed to understand and take into account the complex interdependence among the various parts of the system. We have not established a 'systemic view" of education as a social system.

Watson (1967) noted that the major impetus for change in organizations is from the outside. More recently, Morrish (1976) in examining factors which affect change, claims that change is dependent very much on the milieu in which it occurs.

There are many conditions and events in our society which have forced or prompted schools to change. Other societal factors have hindered or prevented change attempts. Global conditions related to the economy, the arms race, the need for protection of the environment, and food supply are undoubtedly having both direct and indirect effects on schools. World events, such as Sputnik and the energy crisis, certainly have had effects on schools. Federal concerns and developments can have implications for schools provincially and locally. The current national unemployment problem, for example, has resulted in federal initiatives which will provide additional funds for technical institutes and this in turn will increase emphasis on job-related subjects in schools. Youth exchange programs have been a cooperative response among federal, provincial and local authorities to regionalism in this country. Many people believe that if there had been a major national crisis or development in 1867, that education would not have become primarily a provincial responsibility in Canada. In Saskatchewan, the impact of the media, energy costs, and

declining enrolments upon schools is obvious. Who knows the more subtle effects of a new work ethic, "the swing to the right," and the increase in divorce rates? Native education programs, drug, alcohol and sex education, driver education, and consumer education are all responses of school systems to prevailing social conditions.

It should be remembered that both individual and organizational initiative are important in being sensitive to forces in the external environment and in planning for change accordingly. The leadership of the Saskatchewan School Trustees Association in financing management studies or of the Saskatchewan Teachers' Federation in initiating teacher-intern workshops are examples of such initiatives. At the school system level, teachers in Beauval started a local history program and people in the Saskatoon public school system developed a new English curriculum for Division III. The provincial government in Saskatchewan has a fine reputation for leadership in curriculum development.

The point being emphasized is that forces outside of school systems are usually the source of change and major determinants of its success. Seeing educational change as a part of social change is necessary if we are to understand change in schools, but this broader view is almost overwhelming due to the rapid pace of change in our complex society. In order to make the task manageable, the meaning of change must be examined.

The Meaning of Change

The inevitability of change is no longer debated. The concern now is focused on understanding and exercising some control over change. Bennis, Benne, Chin and Corey (1976) draw attention to nonintervention or "natural law" views and to Marxian or radical intervention advocates in establishing

planned change as the only feasible alternative. They define planned change as "... a method which self-consciously and experimentally employs social knowledge to help solve the problems of men and societies." (1976, p. 2). Fullan (1982) observes that a theory of education is required to know what should change and a theory of change is necessary to determine how to bring about change. He adds, that to grasp the meaning of change, one has to understand "the big picture" of sociopolitical factors and "the small picture" of the effect of the change on individuals at all levels of the educational system. Dalin provides further insight into the meaning of change (1978, p. 22-23):

1. Change is a process phenomenon. Change takes place over time. It can be evolutionary or revolutionary in nature and it involves a number of stages, involving individuals, institutions and sub-systems. It is partly determined by forces outside the control of educators or institutions within the system. The success and failure of an innovation will depend, to some extent only, on systematic efforts within the system to manage the process of change. When this is said, however, the effects of the management process can be greatly improved by a thorough understanding of the complexities and dynamics of the change process itself.
2. Change is a systemic phenomenon. Any change in a social system is like a chain reaction. Individuals, organisations and interest groups are linked through formal and informal connections which are influenced by external forces. The successes and failures of educational reforms are largely dependent on the relationships and strengths of these forces over time, and the way the change process is managed to cope with the systemic and dynamic nature of the situation. The question of who decides for whom, at what cost, for the individuals and institutions involved is crucial in determining the dynamics and the relationships over time.
3. Change is a multi-dimensional phenomenon. Educational change can only be fully understood using different perspectives, including different discipline perspectives. A number of theories and hypotheses from disciplines such as economics, anthropology, sociology, psychology, administrative and organisational science, and pedagogy, are important in understanding the many dimensions in the process of change. The process is 'political', and it is

> 'technical'. It is 'organisational' and it is 'individual'. Only a 'process analysis' that takes the characteristics of the innovation and the setting into account can grasp the full meaning of the process.

Change, for purposes of this paper, means a planned, systemic multi-dimensional process. The unit of change may be an individual, group, intergroup, organization or society. Zaltman and Duncan (1977) define innovation as any idea, practise or material perceived to be new by the unit of change. In other words, a change process is used to bring about an innovation. The innovation is the object of change.

The change process can be thought of in stages. A description from sociology (Hirsch and Zoleschan, 1964) states that in the first stage of the change process individuals perceive discrepancies between a real situation and an ideal situation. These discrepancies, called exigencies, trigger a series of processes, namely articulation, action and institution-alization. In the articulation stage, some discomfort is experienced, elements in the situation are analyzed, and a judgment is made which establishes the legitimacy of the need and its associated goal. Some action is then taken, and the final step is institutionalization when established patterns are modified. Another similar view labels the three phases of the change process as unfreezing, moving and refreezing (Zand and Sorensen, 1975).

The change process in education has been outlined by Fullan (1982, p. 39-44) as having four phases:

I Initiation, Mobilization or Adoption

II Implementation - initial use

III Continuation or Institutionalization

IV Outcome

He is careful to point out that even moderately complex changes take from three to five years to move from phase I to III. Basic to Fullan's view is an important distinction between adoption and implementation. He describes adoption as a decision to proceed or a change "on paper." Implementation is a change in practice after adoption. The Division System was certainly adopted in Saskatchewan but it is not at all clear whether or not it was implemented. In the Rand Studies (1977) there was similar emphasis on the difference between initial use and institutionalization which was considered to be when an innovation became integrated into a school system as a standard or characteristic feature.

It is important to note that phases of the change process are believed by most authorities to be interacting, yet Zand and Sorensen claim that both management and behavioral scientists focus too much on one or another phase in isolation without adequately synthesizing the many interacting elements (1975). It is agreed, for example, that the adoption process affects implementation and that implementation affects continuation but very little is known about the details of the interactions.

Characteristics of innovations, identified in the Rand Studies and reported by Dalin (1978, p. 21), can further clarify the meaning of change and innovation:

1. Centrality. By 'centrality' one means the extent to which an innovation seeks to change the goals, norms or patterns of behaviour that are perceived to be core or central to the institutional setting.
2. Complexity. 'Complexity' refers to the extent to which a project proposes a relatively complicated far-reaching treatment and the extent to which that innovation attempts to affect behaviour and attitudes of a number of groups within the institutional setting.
3. Nature and amount of change. This dimension differs from the preceding two in that it refers to the requirements

made specifically on the individual participant, not on groups or units within the organisation. The important aspect of the nature of change is the level of difficulty which an innovation presents for an individual implementor.

4. Consonance. This concept refers to the degree of 'fit' between the goals, values and practices of an innovation and those of the adopting institution.
5. Visibility. This concept refers to the extent to which innovative efforts are observed or monitored by non-participants both within and outside the institution, i.e. the degree to which the pace of implementation and success or failure are 'public'.

Just as change in education is a part of the total social scene, school organizations, within which curriculum change occurs, are themselves social institutions. An important component of understanding change in education is basic knowledge about organizations in general and school organizations in particular.

Organizations

Animal Farm by George Orwell and Lord of the Flies by William Golding both illustrate the need of human beings to be organized. There is no question that organization is a prominent feature of western civilization as people increasingly rely on organizations to help them to cope with a complex, rapidly-changing environment. Knowledge of organizations is basic to the understanding of change in education and to making sense out of the dynamics of our day-to-day life.

Etzioni (1961) has defined organizations as social units deliberately constructed and reconstructed to seek specific goals. It is important to realize from this definition that, since organizations are created and recreated, they come and go and change. In this province we have recently seen a Land Bank Plan discontinued and a Farm Start program launched. We have seen passenger rail service discontinued and executive bus service

provided. We have noticed some organizations, such as the Red Cross, very effectively change goals whereas others, such as Home and School Associations, search for a purpose. Organizations are not fixed -- they are dynamic creations of people.

Organizations, like people, have basic needs. Selznick (1957) believes that every organization requires security as a whole in relation to forces in the environment, stability in lines of authority and communication, predictability in informal relations, continuity in policy and the sources of its determination, and homogeneity of outlook with respect to the meaning and role of the organization. Parsons and Shils (1951) add that adaptation, goal achievement, integration and latency are four problems that every organization must solve in order to survive. Barnard (1938) in classic work stated that organizations may be created if there is purpose, communication and people willing to serve. To continue, according to Barnard, an organization must be efficient in meeting the needs of its own members and effective in relating to the environment.

Barnard's concept of efficiency deserves some elaboration because there is increasing concern today about topics such as job satisfaction, quality of work life and stress. Classical work dealing with individuals in organizations was done by Getzels and Guba (1952). They described a nomothetic dimension dealing with the organization and its roles and expectations. The idiographic dimension focuses upon the individual with a particular personality and need disposition. Both of the dimensions arise from the social system and observed behavior is a manifestation of some compromise between the two since individuals and organizations seldom "fit" perfectly. An example may revolve around a teacher who would really

prefer to modify a grade twelve program but is expected to have students write grade twelve departmental exams. The observed behavior may be a disgruntled teacher on a prescribed course or a satisfied, accredited teacher. Guidelines for efficiency may be gleaned from Wiles (1955) who found after intensive study several years ago that people in organizations need recognition, participation, self-respect and security. More recent work in this area has been done by Herzberg (1966), McGregor (1960), and Hersey and Blanchard (1977).

Organizations may be created with certain characteristics or they may develop them as they continually respond to changing conditions. In any case, it is possible to classify organizations according to characteristics they possess. The most common type of organization is known as a bureaucracy. Goodstein (Chapter 4 in Burke, 1978) goes so far as to say that bureaucracy is the most rapidly growing industry in the United States. Mouzelies (1967) has identified characteristics of bureaucracy to include fixed jobs with a high degree of specialization, hierarchical order, rules to govern conduct, impersonalization, and emphasis on competence. Hanson (1979) concludes that school administrators operate in a bureaucratic setting, teachers are in a social-system setting and elected officials are in an open-system setting where interaction with the environment is paramount.

Weisbord (Chapter 2 in Burke, 1978) has categorized organizations as either output-focused or input-focused. Output-focused organizations are known to have formal authority, concrete goals, task interdependence, performance measures, and cohesion. The emphasis is on what is produced or output. It is pointed out that these organizations may have too much

structure and thereby make individuals feel constrained. Input-focused organizations place evaluation at the input end, have multiple or unclear goals, experience difficulty in measuring results and in evaluating personnel, feel that administrative action is capricious and irrelevant, and see no obvious correlation between working together and getting a job done. Incentives in in-put organizations toward joint, rational problem-solving are low and individuals see themselves as entrepreneurs rather than employees. Professionals wish to be left alone, according to Weisbord, and show little enthusiasm for sharing risks and responsibilities for making changes that will constrain their own behavior. Generally, business organizations are considered output-focused and public organizations, including schools and universities, are thought to be input-focused.

Related to Weisbord's work is a comparison of public and private organizations by Goodstein (Chapter 4 in Burke, 1978). The comparison is centered around six interrelated processes that are inherent in all organizations: purposes, structure, rewards, helpful mechanisms, relationships and leadership. Private organizations concentrate on profit, compete for clients and require interdependence. Public organizations have unclear goals, built-in clientele, and less obvious need for interdependence. Public organizations, in Goodstein's view, are more heavily bureaucratic than private organizations and they tend to reorganize rather than confront issues. A comparison of reward structures indicates that public organizations reward scope of responsibility rather than quality of work, seniority rather than innovation, conflict avoidance rather than confrontation, compliance rather than risk-taking and putting in time rather than accomplishment. It is also stated that in public

organizations norms conspire against effective leadership, there are several different constituencies to which leadership must respond, and, since the news media monitors the work, there is a strong norm to protect oneself. The schools we are studying are the public schools and, again, the reader may decide how much of the foregoing applies to them.

The views of Weisbord and Goodstein are supported by other authorities who refer specifically to educational organizations. Miles (1964) says that school organizations are marked by goal ambiguity, input variability, role performance invisibility, low interdependence, vulnerability and low technological investment. Deal, Meyer and Scott (1975) conclude that schools are doubly segmented among schools within a division and among classrooms within a school. Corbett (1980) in a case study found schools to be loosely-coupled in that there was little coordination of work activity, slow spread of influence, infrequent inspection, lack of feedback, decentralization and delegation of discretion. He found that loose-coupling was adequate for low-scope changes which required only a few sub-units to alter behavior. High-scope changes which involve many units will require tighter coupling in his opinion. Hanson (1979) used the term "pocket veto" to refer to the right teachers feel they have to do as they please when they close the classroom door. Any move to impinge upon a teacher's autonomy in the classroom can be met by the "pocket veto" and a variety of other informal control devices.

The root word of "organization" quickly brings to mind the question of functioning and health. Miles is credited with having first defined dimensions of organizational health (1965, p. 231-236):

1. Goal focus - Goals must be clear and acceptable to organization members. They must be achievable and appropriate in terms of the environment.

2. Communication adequacy - Communication must be distortion-free both horizontally and vertically within the organization and across the boundary of the system to and from the environment.

3. Optimal power equalization - Distribution of influence is equitable and struggle for power is not bitter. Interdependence is seen as necessary to accomplish goals.

   The three dimensions above are task-centered.

4. Resource utilization - Personnel are used effectively as are material resources. Efforts are coordinated. People feel a genuine sense of developing as persons in the process of contributing to the organization.

5. Cohesiveness - The organization has an identity and members feel attracted to it.

6. Morale - There is a sense of well-being and satisfaction.

   Dimensions four, five and six deal with internal, maintenance needs.

7. Innovativeness - A healthy system changes procedures and goals as it becomes more differentiated over time. It does not become routinized.

8. Autonomy - The organization has an identity and does not respond passively to the environment. Outside influences are carefully considered but the organization determines its own behavior.

9. Adaptation - Contact with surroundings are realistic and effective. There is stability and stress tolerance.

10. Problem-solving adequacy - Problems are inevitable. There are well-developed structures and procedures for sensing the existence of problems, for finding solutions, for implementing solutions and for evaluating them.

The four dimensions above are related to growth. The dimensions of organizational health deal with the essential task, maintenance and growth aspects of organizations. The dimensions are useful reminders of the dynamics of organizations and they provide a framework for assessing organizations. According to these dimensions, are school organizations in Saskatchewan healthy?

Organizations are complex, changing entities and so it is not surprising to find that organizational theory also changes as circumstances change and as knowledge is extended. Whetten (1981) suggests that in the last twenty years organizations are increasingly viewed as open systems, organizational administration is more and more political, and decision-making is characterized by tension between the routine and the novel. Together these shifts mean than there has been a move from a closed-rational to an open-political approach with the administrator becoming a dilemma manager rather than a problem solver. Put another way, Whetten says this is an efficiency (internal) versus effectiveness (external) dilemma.

There are various methods of viewing the broad picture of society, sources of change, the meaning of change, and the functioning of school organizations. These perspectives are presented as a synthesis of this section.

Perspectives on Change in Educational Organizations

Prior to the 1970's studies of change concentrated on the adoption and diffusion of new ideas and followed an agricultural-sociological model. Rogers (1962), after studying the diffusion of new ideas in agriculture, concluded that the adoption process had stages of awareness, interest, evaluation, trial and adoption. Furthermore, he stressed that adoption takes time and that people adopt new ideas at different rates. Different rates of adoption enabled Rogers to categorize adopters as being innovators, early adopters, early majority, late majority and laggards. Study of the characteristics of innovators led Rogers to recommend to school superintendents who wished to encourage innovation that they choose young teachers with breadth of training and cosmopolite sources of information.

Although a National Diffusion Network was established in the United States in 1977, Gross (1971) and others believe that the diffusion model has been inappropriately applied to study of complex innovations in organizations such as schools. Dill and Friedman (1979) have identified a diffusion framework as well as a complex organization framework, a conflict framework and a planned change framework for the study of change. They claim that the contemporary orientation is toward renewal or institutional improvement. Gaynor (1975) suggests that study of change has moved from a sociological to a human relations, to a political and now to a perspective which focuses on organizations and individuals. It seems to be agreed in the literature that the traditional diffusion model is too narrow.

Some writers have identified dilemmas and conflicts among models that have been designed for the study of change. Sieber states that there is a persistent dilemma between an existential, user-oriented, conception and a bureaucratic conception which includes research and development, role definitions and emphasis on organizational practices (1976-77). Papagiannis, Klees and Bickel (1982) claim that the dominant paradigm reflects human captial theory, a functionlist-modernity perspective, and a criterion of efficiency. They advocate a radical paradigm with concern for equality and individual, rather than corporate, interests. In short, they believe that innovations which conform to the capitalist system succeed and those that challenge the structure do not.

A useful comparison of contemporary perspectives on planned change has been provided by Crowfoot and Chesler (Chapter 5.2 in Bennis et al, 1976). Their work, together with that of House (Chapter 1 in Lehming and Kane, 1981), has been adapted by the writer to provide Table 1. House points out that the technological perspective is by far the most dominant of the three perspectives although the political perspective has become a major competitor since the early seventies. He predicts that the cultural perspective will become increasingly useful as an explanation for developments in society.

It is important to recognize and think about various perspectives for studying change. A change may be examined from any one of the perspectives or from a combination of perspectives. New math, the Division System, and outdoor education can be considered from a technical, political or cultural perspective or from a combination of views. A perspective provides a framework but it also imposes limitations. The remainder of this paper is written primarily from a technical perspective and that is

TABLE 1

PERSPECTIVES ON CHANGE

	Technical	Political	Cultural
Principles and Assumptions	Society is made up of complex inter-dependent systems Emphasis on the rational, bureaucratic Consensus, cooperation Conflict is dysfunctional	Society consists of different groups competing for scarce resources Power struggles, conflict, and competition Legitimacy is the issue Cooperation is problematic	People are members of cultures and subcultures Change requires the interaction of separate cultures Changes have different "meanings" Cooperation is enigmatic Conflicts over values and interests
Focal Points	The innovation itself Technique and effects	Innovation in context Power and authority	Context Meanings and values
Values and Ethics	Common value framework Ethics are authoritative Innovation is for the common good Pursue change aggressively	Values are shared by all Ethics are contractual Innovation is not necessarily best for all Compromise	Values are shared with small groups Ethics are relativistic Innovation may have unanticipated consequences Do not impose
Orientation	Professional role prominent Production oriented	Mechanisms for negotiation Conflict oriented	Search for meaning in community Meaning oriented

a serious limitation.

Summary

The purpose of this section of the paper is to have provided a review of the "big picture" regarding change in educational organizations. Change in education has been described as a type of social change. It has been pointed out that sources of, and support for, change in education are found to a large extent among socio-political conditions in society at large. Change has been defined, not as an event, but as a multi-dimensional, systemic process. Innovation is the object of change. Important distinctions have been made between adoption and implementation and between implementation and continuation. Finally, some characteristics of educational organizations have been outlined and perspectives on change in education have been presented. With this review we are in a position to look specifically at curriculum implementation.

PART II CURRICULUM IMPLEMENTATION

Implementation

Curriculum, for purposes of this paper, is considered to be a functioning curriculum that operates to guide and govern the environment and activities of the school. Curriculum includes instruction since, in the view of the writer, any division between curriculum and instruction is artificial and dysfunctional. Curriculum is overt in part and "hidden" in part.

Some individuals or groups must take leadership to develop a curriculum. Development includes being aware of, and sensitive to, the larger environment, deciding on objectives, content, instruction, and evaluation. According to Jackson (1957) an administrative approach was in vogue in the 1920's whereby administrators made most curriculum decisions. Smith, Stanley and Shores (1957) indicate that some improvements were made by means of an administrative approach but that it has generally been abandoned because of disappointing results. Taba (1962) describes a "grass roots" or group approach to facilitate planning at the school or classroom level by teachers who are given a good deal of autonomy. A demonstration or experimental approach as outlined by Smith, Stanley and Shores (1957) includes encouragement for leading teachers to experiment and then results are used to influence other teachers. The most common approach in Taba's opinion (1962) is a committee approach whereby committees are used to provide a framework or guide for a particular subject. Whatever the approach, curriculum development involves relating the total, large environment to teachers and students in the classroom. Curriculum development is a complex, costly process but it is worth very little

unless it is implemented. Curriculum development is a means by which we hope to improve the teaching and learning in schools -- it is not an end in itself.

While curriculum implementation will be affected by the development and adoption processes, Fullan and Pomfret state, "... implementation is not simply an extension of planning and adoption processes. It is a phenomenon in its own right." (1977, p. 336). Common (1981) defines adoption as the decision to begin to implement the curriculum whereas implementation is the actual use of the curriculum. Implementation requires study because according to many authorities, such as Fullan and Pomfret (1977), Common (1981), and Charters and Jones (1973), many innovations are adopted but never implemented. A majority of studies have relied on "reported use" and no actual observation in classrooms took place.

After analysis of fifteen case studies, Fullan and Pomfret (1977) defined five dimensions of implementation as follows:

1. Subject matter or materials - This dimension, in addition to content, includes print material, audio-visual material, the spoken word and demonstrations.
2. Organizational structure - Different ways of grouping students, arrangements for time and space and provision of materials are part of this dimension.
3. Role change - Changes often require new teaching styles and new role relationships among students, teachers and others.
4. Knowledge and understanding - This refers to the extent that users understand the philosophy, objectives, roles and requirements of the innovation.

5. Value Internalization - Valuing in this category reflects the extent to which an innovation is congruent with an individual's personal views.

These writers also discuss implementation from two perspectives: fidelity of implementation is the extent to which actual use corresponds to intended use and mutual-adaptation is how innovations become changed or developed during implementation. Some curriculum changes aim for fidelity in implementation and others have mutual-adaptation as an objective.

The development of a model for implementation was the focus of work by Leithwood and Russell (1973). Their model is based on the view that curriculum implementation encompasses, rather than serves, curriculum development. They have developed a matrix with eight components of change on the horizontal axis and eight stages in implementation on the vertical axis. Each of the sixty-four cells represents an interaction. The matrix is sketched in Table 2. The originators of the model feel that it actually portrays the complexity of the implementation process, whereas many models, in seeking to simplify, have been misleading by suggesting that implementation is much less than it really is.

Implementation has been the subject of intensive study at the University of Texas at Austin. Hall and Loucks (1977) believe that implementation is a developmental phenomenon that can be measured. They have identified eight levels of use (LOU's) as nonuse, orientation, preparation, mechanical use, routine, refinement, integration and renewal. In related work, Hall, Loucks and others (1975) prepared a grid with levels of use determined for each of seven categories that represent key functions that users carry out in implementation. The categories are knowledge,

TABLE 2

A SKETCH OF AN IMPLEMENTATION MATRIX - Leithwood and Russell (1973)

Stages	Components				Roles			
	Context	Organizing	Evaluating	Development	Teacher	Principal	Admin.	Academic
Climate								
Agree to Begin								
Establish Organization								
Identify Problems - Goals								
Study Solutions								
Pilot								
Adopt, Adapt or Reject								
Field Trials								

acquiring information, sharing, assessing, planning, status reporting, and performing. They conclude that a user may not be at the same level of use in all categories and that a decision-point is reached in moving from one category to another. It is also indicated that several cycles of growth are required. It was found in some studies, for example, that after three cycles 30-40% of the users were stable at the routine level and that special interventions were required to move them to the refinement level.

Leithwood (1981) from the Ontario Institute for Studies in Education builds upon the work of the Texas group but advocates a set of procedures for defining stages of implementation rather than fixed stages. The procedure used is the development of an innovation profile in the form of a two-dimensional matrix. Stages or levels of use are on one axis and dimensions of the curriculum are on the other. He has defined nine curriculum dimensions as platform or image, objectives, student entry behaviors, assessment tools and procedures, instructional material, learner experiences, teaching strategies, content and time. After the profile is developed the implementation plans to move various dimensions to higher levels of use can be formulated. Leithwood cautions that to avoid cooption the innovation must be related to existing practice and yet novel features must be given attention. An assumption underlying this approach is that user behavior changes incrementally and that implementation procedures must be carefully tailored to a particular situation. Leithwood and Montgomery (1980) advocate an approach for the evaluation of implementation that incorporates the concept of an innovation profile in order to compare actual practices with what was intended.

Dalin (1978) categorizes changes as technological change, behavioral change, organizational change and social change. Such break-downs are misleading in the sense that we tend to lose sight of the fact that the implementation of a new curriculum involves changes in organization, technical skills, social interaction and behavior. Implementation is clearly a very complex phenomena deserving of much more attention than it has usually received. It is not surprising that Common (1981, p. 47) warns, "Curriculum implementation does not just happen. It must be a deliberate, planned, and supervised activity." It is time now to look at ways of making implementation happen.

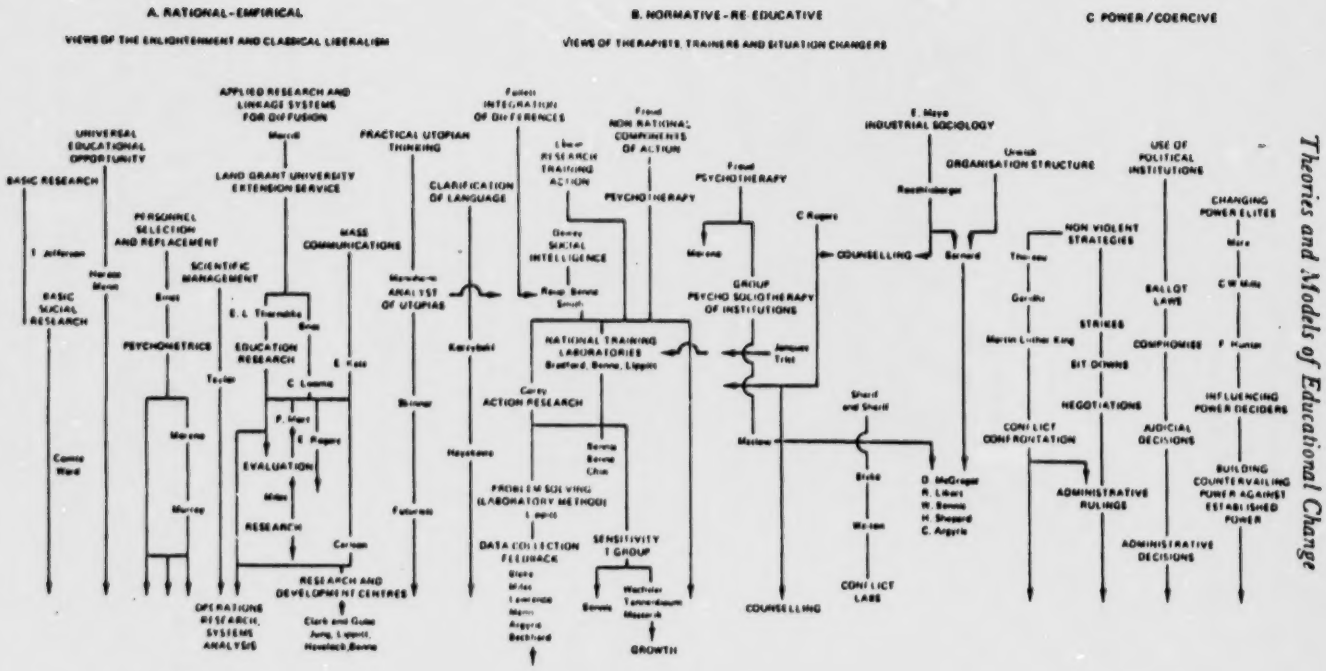
Change Strategies

Attempts to get Saskatchewan residents to use seat belts in vehicles provide an example of strategies for change. At an early stage an appeal was made in the form of statistics regarding how many lives would have been saved if seat belts had been worn. At the same time highway signs and messages on the media reminded us to do up the seat belts. Eventually vehicles were provided with warning lights and alarms that were active until belts were done up. Finally, legislation was passed and people were threatened with a fine if they failed to obey the law which made use of seat belts mandatory.

Strategies used to implement a change regarding the use of seatbelts can be analyzed with the assistance of a schematic overview provided by Chin and Benne and shown on the following page. The statistics regarding lives that would have been saved were provided on the assumption that people would be governed by reason -- a rational-empirical strategy. Reminders to do up belts and scenes of belts being done up are an attempt

TABLE 3

Theories and Models of Educational Change



From: Bennis, Benne, Chin and Corey, 1976, p. 45 (Copied in Dalin, 1978, p. 61)

to re-educate people and to make doing up belts the usual, or normal, thing to do -- a normative re-educative approach. A power-coercive strategy includes the punishment of an alarm and the threat of a fine. It is interesting to note the sequence and combination of strategies used in this example.

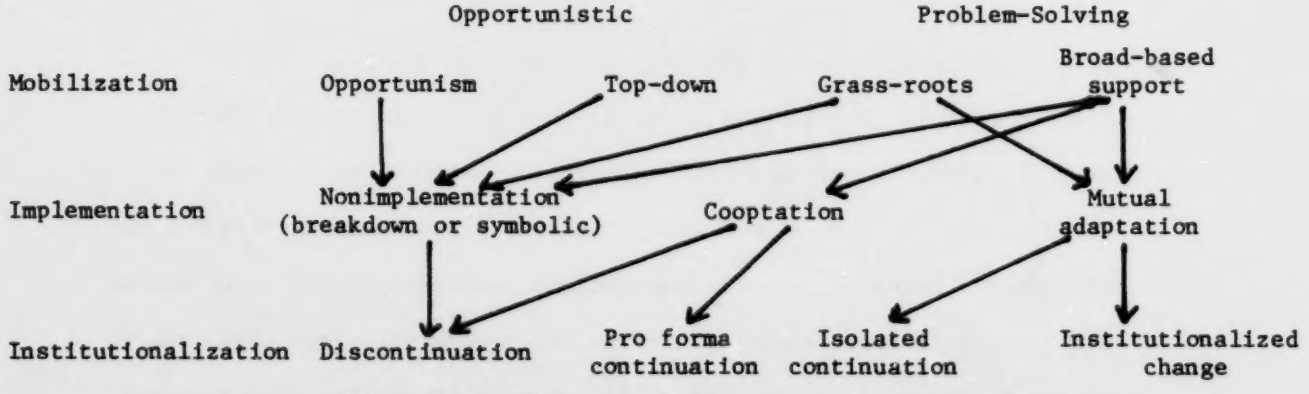
The three general types of strategies described by Chin and Benne each have underlying assumptions (1976, p. 22-45). The rational-empirical strategy is based upon an assumption that people are governed by reason and that change will be made on the basis of rational self-interest. The normative re-educative strategy does not deny rationality but assumes that change requires changes in attitudes, values, skills and relationships as well as in knowledge and reasoning. The application of power, political or otherwise, is basic to the power-coercive strategy.

Strategies have been analyzed in a different but related manner by Dalin (1978) and Havelock (1973). Their first strategy is based upon problem-solving and claims that change is made as people attempt to solve problems which are meaningful to them. The social interaction model highlights communication patterns or diffusion networks. The research, development and diffusion strategy describes large-scale, carefully-planned change. The linkage strategy is eclectic in that it connects user problems, through a social interaction network, to research and development. It can be seen that this analysis is related to the work of Chin and Benne in that the assumptions underlying social interaction are similar to those basic to a normative re-educative strategy, and a rational-empirical strategy rests on assumptions similar to a research, development and diffusion model. The problem-solving and linkage models encompass two or more of Chin and Benne's categories.

Strategies for change are affected by the attitudes and motives of change agents. The Rand studies, a group of reports done from 1972 to 1978, studied the effects of federal seed money on the implementation of various innovations in American schools. In these studies it was found that there were two prevailing attitudes toward the innovations which have been termed "opportunistic" and "problem-solving." Opportunistic districts implemented change from the top down (power-coercion) only because extra money was available. This strategy tended to result in nonimplementation and discontinuation (See Table 4). Other districts saw the federal funds as an opportunity for assistance in solving local problems. The strategy tended to involve people at the classroom or "grass-roots" level, support was broadly-based, and continuation after federal funds were discontinued was more likely than in districts following an opportunistic approach. More specifically, it was found that

TABLE 4

OPPORTUNISTIC AND PROBLEM-SOLVING ATTITUDES
ADAPTED FROM THE RAND STUDIES - 1978



useful activities included specific training for teachers based upon teacher needs, classroom assistance available "on-call", observation of projects elsewhere, regular feedback sessions, moral support, teacher participation in decision-making, local development of materials, and the participation of principals in training. Activities considered not useful were the use of outside consultants, packaged approaches, "one-shot" training, payment for participation, formal evaluation, comprehensive projects that spread resources too thinly, and meetings concerned with administrative details.

The behavior of the change agent has been the basis for other descriptions of implementation strategies. Blake and Mouton (Chapter 2.1 in Bennes et al, 1976) believe that an intervention may be acceptant or of a counselling nature, catalytic, confronting, prescriptive, or based upon principles, models and theories. Similarly, Havelock (1973) states that a change agent may be a catalyst, a solution giver, a process helper or a resource linker. Havelock suggests that a strategy for implementation involves building a relationship, making a diagnosis, acquiring relevant resources, choosing a solution, gaining acceptance and providing for self-renewal. The styles suggested by Havelock are similar to those offered by Leithwood and Russell and reported in Table 2 of this paper.

Labels for various change strategies are necessary for communication and models assist us in synthesizing and seeing alternatives, but Sieber (1976-77) warns that models present a dilemma and typically overlook non-rational motives for change such as publicity, legitimation of professional autonomy, gains in status and social advantages. The dilemma,

referred to earlier in this paper, is between an existential or user orientation and a bureaucratic orientation. In the light of shortcomings of any one model, Sieber advocates the field placement of full-time generalist change agents who can use a contingency model or strategy.

The purpose of any strategy of change is to make successful implementation and the determination of a strategy depends upon which factors seem to be affecting a particular situation.

Factors Affecting Change

A desire to gain better insight into the factors affecting change in education in various countries prompted Per Dalin to promote the establishment of an International Movement Towards Educational Change (IMTEC). Originally established by OECD, IMTEC is now a non-profit foundation under the directorship of Dr. Dalin and an international, professional Advisory Council, chaired by Dr. John Goodlad. On the basis of analyses of approximately two hundred case studies from several different countries, Dalin suggests that factors affecting change in education fall into four categories (1978, p. 77-88):

1. The Environment - These factors include the economy, the political situation, societal conditions and expectations, employment conditions, culture, technology, and demography.
2. The Educational Setting - Financing, decision-making, support, size, and climate are important variables within school systems.
3. The Innovation - Whether the innovation requires primarily technological, behavioral, organizational or social change is an important consideration. Characteristics of the innovation such as relative advantage, centrality, complexity, congruence with existing goals,

and communicability also need to be taken into account.

4. The Change Strategy - Implementation will be affected by the strategy employed to bring it about.

Dalin emphasizes that the categories of factors interact. An environmental factor such as the economy may be of little importance in a wealthy school division but of major importance in a poor school area. A strategy appropriate for a central, complex innovation in a tightly-coupled system will not likely be appropriate for the same innovation in a loosely-coupled system. One major advantage to studying change at an international level is that a wide variety of political, economic, cultural and social factors can be analyzed. For instance, there have been case studies from Sri Lanka, Indonesia, Norway, England, Italy, the United States and Canada revolving around innovations which are based upon an inquiry approach to instruction.

Many other writers have described categories of factors similar to those identified by Dalin. Fullan and Pomfret (1977) list socio-political conditions, characteristics of the adopting unit, characteristics of the innovation, and strategies as types of factors. Dow and Whitehead (1981) say that curriculum implementation is influenced by the curriculum itself, by user attitude, knowledge and skills, and by features of the organization such as flexibility, role clarity, communication patterns, and incentives. Kritek (1976) states that implementation is affected by factors such as goals, planning, resources, user roles, administration and feedback systems since not all factors can be predicted and taken into account.

Wright (1982) surveyed research reports for the period 1970 to 1981. Since her work is the most comprehensive Canadian coverage of this vital

topic known to the writer it is reported in Table 5 in considerable detail. The intervening variables modify the change effort in some way, either by hastening, slowing, or keeping the change occurring at a constant rate. According to Wright "These variables operate either from within the school system, endogenous intervening variables, or from outside the school system, exogenous intervening variables. The school system as an organization undergoing change is permeable to forces from outside and somewhat responsive to them as well as responsive to pressures from within the system." (Wright, 1982, p. 162).

Factors affecting implementation are commonly considered to be forces acting either to support or to prevent implementation. Hanson has combined the concept of forces with stages in the change process: unfreezing, changing and refreezing (See Table 6). An analysis of forces affecting change is known as a force field analysis. Factors which affect a change process adversely are known as barriers and they deserve special consideration.

Barriers to Change

Factors which slow, direct or halt a change process are referred to in the literature as barriers. Barriers may be indicators of basic problems in the innovation itself, in the organizational framework, or in the strategy used. After analysis of case studies from several countries, Dalin (1978, p. 25) has delineated four categories of barriers:

1. Value Barriers - These barriers are related to the philosophy of the receiving group. Some work-study programs in high schools have been affected by this type barrier because teachers believed the schcol was an "academic institution."

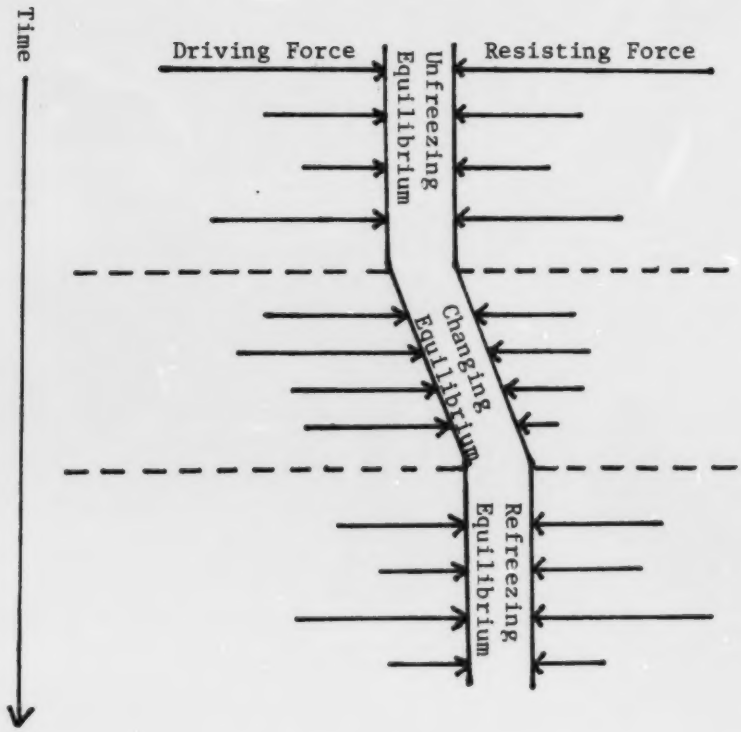
TABLE 5

FACTORS AFFECTING IMPLEMENTATION - WRIGHT (1982)

Category	Factors
I. People	Users - principals, teachers, students Administrators - supervisors, superintendents, professional and support staff, consultants Implementation Staff - change agents, monitors, trainers, curriculum managers Exogenous - parent, public, school board
II. Curriculum	Anatomical Attributes - philosophy, components Ascribed Attributes - availability, practicality, clarity, relative advantage, compatibility, trialability, observability, flexibility, complexity, quality, communicability, cost
III. Strategies	workshops, released time, timing, feedback mechanisms, team-building, pilot projects, goal setting, involvement of appropriate persons, formative and summative evaluation
IV. Organization	structure, space, climate, formal and informal organization, resources, prehistory, reward system, roles, behavior, goals, decision-making
V. Intervening Variables - Endogenous	communication barriers, limited resources, peer pressure, interactions, compliance, available time, overload, perceived importance of change, role clarity, ability and predisposition of user to change
VI. Intervening Variables - Exogenous	Community - demands, socio-economic constraints, politics, macro-level influences, control of board of education, culture, special interest groups, special education needs School Setting - physical features, experience with change, number of teachers not involved, inter-school cooperation, teacher beliefs, workshops for school-community understanding, tendency toward inertia, presence of individual teachers opposing the curriculum Other - teacher training institutions, field centers, external change agents, academic-school interaction, available research, teacher organizations, ministries of education, media, funding foundations, federal government policy, local government policy, technological factors, professional organizations

TABLE 6

FORCE FIELD ANALYSIS



From: E. Mark Hanson, 1979, p. 314

2. Power Barriers - An innovation usually requires role changes which in turn alter the social structure of a school. New leaders emerge. Some people lose status. Some resist an innovation because they do not want to see status and power structure changed.

3. Practical Barriers - The most common practical barrier is lack of teacher time. A crowded curriculum and lack of resources are other practical barriers.

4. Psychological Barriers - A change in behavior requires a person to "take a chance." Some people may lack the confidence to do so.

Eichholz (1963) states that teachers resist change because of ignorance, suspended judgment, situational rejection, personal rejection, or experimental rejection. McNally (1960) says teachers may resist change because they do not see a need for it, fear experimentation, are unwilling to devote time, and are disillusioned with previous attempts at change. More recently, Dow and Whitehead (1981) have found that major barriers include problems related to communication, role clarification, time, resource support, information about new curriculum guidelines, student evaluation, and organizational characteristics such as inflexibility. Hall and Loucks (1978), building upon the work of Frances Fuller, have identified stages of concern that teachers typically go through regarding any particular innovation. The stages are: awareness, informational, personal, management, consequence, collaboration and refocusing. They point out that the most intense concerns of non-users are related to awareness, information and how the innovation will affect them personally. They summarize by stressing that personal concerns are legitimate,

concerns vary greatly within any group, and teachers' concerns may not be the same as those of developers or change agents.

The difference in administrators' view of teachers and how teachers see themselves is highlighted by Common (1980). She claims that administrators see teachers collectively as agents of their policies and consumers of their products. Teachers, according to Common, see themselves as autonomous persons, influencing and caring for children. She concludes, "It is this clash of images that lies at the root of implementation failure." (1980, p. 5).

The internalized meaning of change to each individual involved in a change process is so crucial to Fullan that he titled his book The Meaning of Educational Change. He states (1982, p. 26):

> ... real change, whether desired or not, whether imposed or voluntarily pursued, represents a serious personal and collective experience characterized by ambivalence and uncertainty, and if the change works out it can result in a sense of mastery, accomplishment, and professional growth .... The anxieties of uncertainty and the joys of mastery are central to the subjective meaning of educational change, and to success or failure -- facts which have not been recognized or appreciated in most attempts at reform.

Summary

Within the "big picture" of social change sketched in the first section of this paper, curriculum implementation has been examined. The meaning of implementation has been clarified and its complexity has been surfaced. Strategies by which implementation is achieved and factors affecting implementation were reviewed. Particular attention was given to factors known as barriers. This section concluded with emphasis on the importance of the subjective meaning of change for all individuals involved in the process. The review of literature provides the basis for the development of a framework for analysis of case studies.

PART III A. FRAMEWORK FOR ANALYSIS

The purpose of this section is to synthesize the literature and to thereby present an outline that will be used for analysis of case studies. Several writers have contributed but the work of Michael Fullan (1977, 1979, 1981, 1982) must be particularly acknowledged. The framework is shown below in point form and a brief elaboration of each point is provided on the following pages.

TABLE 7

A FRAMEWORK FOR ANALYSIS OF CASE STUDIES

A. The Decision to Adopt
   1. Need
   2. Introduction

B. Factors Important to Implementation
   3. Environment
   4. Climate
   5. Prehistory
   6. Attributes of the Innovation
   7. Strategies - in-service, interaction
   8. Administrative Support
   9. Materials
   10. Time-line
   11. Provision against Overload
   12. Identification of Factors

A. The Decision to Adopt

The Rand studies have revealed that adoption may be based upon opportunism or problem-solving. Problem-solving as a motive for adoption would require some procedure of problem identification and

awareness prior to adoption. Opportunism would be related to perceived opportunity in areas such as receiving additional funds, capitalizing on available leadership, building a reputation, calming a pressure group, or pressuring a school to "unfreeze."

1. Need

Several writers (Lane, 1980, Bermand and McLaughlin, 1978, Fullan and Park, 1981, Leithwood et al 1976) say that successful implementation requires that the innovation be initially perceived to meet a need. This need may have been identified by users in the first place or simply recognized and accepted as legitimate by users. The need may be thought of in terms such as needing a new textbook, better instruction, improved discipline, more interest on the part of students, or "getting out of a rut."

2. Manner of Introduction

Teacher participation in the decision to adopt is often advocated as a means of fostering ownership and improving chances for successful implementation. Authoritative or "top-down" decisions, on the other hand, frequently have an adverse effect on implementation (Rand Studies, 1978). The method by which teachers were made aware of the adoption decision, and the reasons given, are also important considerations.

B. Factors Important to Implementation

3. Environment

The importance of cultural, political, economic, social, and demographic factors has been stressed elsewhere in this paper. Pincus and Williams (1979) suggest that a zone of protective tolerance is required between a school division and its environment. They also

state that a benign environment may be necessary for many changes. Fullan and Park (1981) believe that securing support from school board, community and outside sources are important steps in the implementation process.

4. Organizational Climate

The Rand studies suggest that the climate of an organization has a definite impact on whether implementation will occur. Common (1978) identified two characteristics of an organization which are influential in innovation attempts; the degree of openness and adaptability which in turn affects the system's willingness to create temporary systems to cope with change and to facilitate problem solving. Leithwood and Russell (1973) suggest that establishing a climate for change is a necessary first stage in implementation. Per Dalin (CERI, 1973) identified leadership, participation in decision-making, and problem-solving capacity as important elements of climate.

5. Prehistory

This factor concerns the attitude of people toward earlier change efforts in the school system. Sarason (1971) claims that the success or failure of previous implementation attempts will affect the outcome of subsequent attempts.

6. Attributes of the Innovation

Fullan suggests two attributes of the innovation which must be taken into account; the clarity of goals and means and a clear definition of role changes expected. Hughes and Keith (1980) found that observability, compatibility (sometimes called congruence with system values or goals), relative advantage and trialability correlated with

degree of implementation. Crowther (1972) found that teachers adopt more quickly when the innovation has high relative advantage, compatibility, trialability, observability and low complexity.

7. Strategies

The point is made in the literature that there is no one best strategy for implementation. The most appropriate strategy, or combination of strategies depends upon the factors which are affecting a particular situation. It may be necessary, for example, to follow a strategy which will capitalize on strong community support and also take into account the strenuous objections of teachers. In another case it may be necessary to employ a strategy that will build upon strong teacher beliefs and counteract financial constraints and tradition. In essence, it is necessary to analyze forces, both positive and negative, and plan a strategy accordingly. Fullan (1977, 1979), for instance, suggests carefully planned in-service activities and teacher-teacher interaction as part of a strategy to offset teacher resistance. Herriott and Gross stress the need for leadership in relation to the formulation of strategies for implementation:

> Leadership of high quality is needed if an organizational change effort is to succeed. What is required are administrators who can give leadership to the following tasks: identifying basic problems of their schools, determining their contributing factors, selecting or developing innovations that are "on target", designing and implementing efficient and effective change strategies, incorporating the innovations into their organizations and assessing their effects. Once the decision to introduce an innovation is made, the tailor-made strategy these officials develop to implement it needs to reflect a hard-headed assessment of the matrix of forces in and outside of their school that could block the innovation

> at different stages of the change process. It also needs to specify courses of action to overcome obstacles if they arise. (p. 41, 42).

8. Administrative Support

Many studies have stressed this component. Fullan (1979) suggests that administrators are needed to provide resources and psychological support. Crowther (1972) believes that teachers will adopt quicker if they receive assistance from principal, supervisory personnel or other teachers. Dow and Whitehead (1981) found that one barrier to implementation was identified by teachers as administrator's lack of support. Gross, Giaquinta, and Bernstein (1971) identify lack of leadership as a problem in their study, and Finch (1981) found that resources and organizational support were lacking as a result of the principal's lack of commitment to their project. Common (1978) stated that effective management exhibits leadership, knowledge, and a positive attitude.

9. Materials

Many teachers in various studies (Fullan, 1979, Rand Studies 1977) have felt the need for local adaptation of materials and for materials to be readily available.

10. Time-line

This item refers to released time for teachers to prepare for implementation and also to the overall time period for implementation to occur. Fullan (1979) cautions that implementation invariably takes longer than planners expect.

11. Overload

Again Fullan (1979) points out that teachers need time to adjust to one innovation before another is thrust upon them. There must

be some way of protecting teachers from being burdened with too many innovations at once.

12. Identification of Factors

Each case study to be reported in the following pages included a force field analysis. Forces will be examined to see if patterns emerge and to relate findings to the literature.

The purpose of the framework is to assist in analysis but it must also be recognized that a framework or model is also confining to a certain extent. This limitation is recognized and the comments portion of each case summary is provided to alleviate this concern.

PART III B. CASE NOTES

Twenty case studies have been selected for inclusion in this paper from over forty which were available. The basis for selection included the depth of analysis done by the case writer, the grouping of cases by innovation topic, a reasonable balance of urban and rural settings, and priority to cases which were primarily curriculum changes. There are cases from six city school systems and six rural divisions. Two cases deal with curriculum at the provincial level.

A one-page summary for each case follows. The summary is written in the form of notes with emphasis on analysis of the change process as opposed to a description of the innovation or the setting. The notes are from the case study as presented by the graduate student. Several headings on the summary sheet are from the framework for analysis while other points from the framework are related to indirectly. An overall summary in terms of the framework for analysis is presented in the pages which follow the individual case summaries.

Case Summary Number 1

1. A. Innovation Title: Special Education Program

Type: Curriculum - organizational

Scope: Town Composite High School (Divisions III and IV)

Attributes: Divisible, congruent, high relative advantage, goals were not clear

B. Introduction and Need: Teachers' perceived needs were formulated into a proposal by the principal.

2. Environment (Climate): Students could formerly find employment locally without much education -- this is changing. Student background is varied with many alcohol and family problems. Prehistory was a negative factor.

3. Strategy: Problem-Solving. Five years prior to the innovation teachers visited schools with programs for special students but their proposal was not accepted. Successful proposal started with discussion among teachers which was formulated into a proposal by the Principal.

4. Force Field Analysis:

A. For	B. Against
- Board of Education - attitude	- Financial considerations
- Teachers - attitude	- Complexity
- Needs of students	- Teacher caution (prehistory)
- Compatibility	- Consequences - labelling of students
- Relative advantage	
- Divisibility	- Consequences - teacher load
- Time for interaction and adaptation	- Staffing priorities

5. Outcome: Teachers generally felt positively about the change for themselves, for other teachers and for students. Only one of six teachers had a clear understanding of the innovation at first. Degree of success is "good" and the outlook for continuation is favourable.

6. Comment: Teacher concerns were about discontinuance of special education services in Division III, low scores on standardized tests, lack of student success, and purpose of the school. Teacher responses indicate that problems arose during implementation but assistance was available (Supervisor of Pupil Services) and the Principal maintained an interest in the program.

The case writer felt this case supported the role of principal as change agent, the need for staff support, and the importance of relating a proposal to the Board of Education in terms of students' needs.

Data collected by means of questionnaire and interviews to 4 Board members, 7 teachers and 3 administrators. The writer was the principal.

Case Summary Number 2

1. A. Innovation Title: Special Education Program
   Type: Curriculum - organizational
   Scope: Town Division III School
   Attributes: Divisible, congruent with social priorities but not with values of staff and students

   B. Introduction and Need: Consultant and rural board. Need was not initially perceived by users.

2. Environment (Climate): A wealthy area with 20 church congregations. There is provision for students with special needs in Division I and II. Structure left rural people with no influence over Division III and IV schools yet half of the students are rural.

3. Strategy: Consultant made proposal to rural board (positive), then director of education for town board ("file it"), and then to Division III staff ("no way"). Rural board called a meeting and threatened to withdraw students -- power-coercive.

4. Force Field Analysis:

A. For	B. Against
- Powerful change agent	- Opposition of teachers - "retards"
- Rural Board support	- Teachers felt no ownership
- Ratepayer support for special programs	- No preparation for teachers
- Parental support	- Town board threatened by withdrawal of rural students
- Redundant town, elementary teacher hired for the job	- Student prejudice - "goons"
- Visits to programs in operation	- Elementary school wanted pupils to stay there
- New principal	

5. Outcome: The program was implemented and slowly the support of most of the Division III teachers was gained. It is expected that the Division III school will close in 3-4 years due to enrolment decline and the condition of the building.

6. Comment: In June the new principal, consultant and teacher visited a school with a program in operation. Ownership problem with staff was recognized. The staff viewed change as condemnation of the past and as interference with their back-to-back program in math and English. The principal was challenged to gain support for the program internally, and to "keep the lid on" with town and rural communities. He succeeded in the sense that the program, after two years, is continuing.

The writer was the new principal. Data were collected by direct involvement and interviews.

Case Summary Number 3

1. A. Innovation Title: Special Education Program

   Type: Curriculum - organizational

   Scope: Town Composite High School

   Attributes: Divisible, high relative advantage. Clarity regarding goals and roles was lacking for some in first year.

   B. Introduction and Need: Group of teachers with support of principal and board.

2. Environment (Climate): The town depends on lumber mills to a large extent. Mills will not hire students if it tempts them to leave school or interferes with school. Parents are traditional, and supportive yet do not have high aspirations for education of their children.

3. Strategy: Innovators began with a rational-empirical strategy in dealing with the principal and Board. A re-educative, didactic approach was later used among teachers. A power-coercive method was used with two teachers who did not wish to teach the students.

4. Force Field Analysis:

A. For	B. Against
- Needs of students	- Staff-principal conflict initially
- Support of key staff	- Lack of parental understanding
- Administrators' support	- Lack of student understanding
- Board approval	- Teacher barriers (lower standards)
- Visits to other programs	- Lack of written curriculum
- Seen as non-threatening by most staff	- Lack of time, finances and facilities
- New principal	

5. Outcome: Implementation was considered successful in spite of the barriers that existed during the first year of the program. It is stated in the case study that "we got rid of teachers who were not committed."

6. Comment: The innovation required little technological change, extensive behavioral change, and some organizational and social change. The innovation was complex but there was value congruence. Teacher commitment and administrative support have created stability that would be lost if key teachers left.

   The writer emphasized the importance of ownership, participation, the principal's role in reducing resistant forces, and continuous assessment. It was also concluded that power-coercive strategies with staff produced powerful negative forces.

The writer was the new principal.

Case Summary Number 4

1. A. Innovation Title: Special Education Program

Type: Curriculum and organizational

Scope: City Comprehensive High School

Attributes: Divisible, lack of clarity about goals and roles

B. Introduction and Need: The central office administrators made the adoption decision.

2. Environment (Climate): The school's students are one-third rural. The school had an occupational preparation program for selected grade 10 students for years prior to the innovation but there were many concerns about it.

3. Strategy: Initially it was perceived as power-coercive and "top-down." Provision was made for normative re-educative approaches after adoption.

4. Force Field Analysis:

A. For Implementation

- a "top-down" decision
- The Education Act (1978)
- community support
- importance of the innovation
- internal capacity of staff
- later a normative re-educative approach

B. Against Implementation

- decision too quick and "top-down
- communication problems
- lack of ownership
- power-coercive
- poor identification of target population
- lack of materials and time for in-service

5. Outcome: Initial reaction from teachers was very negative concerning the change process although most saw the need. Implementation was forced at first but gradually is becoming internalized.

6. Comment: A careful distinction between forces affecting implementation and those affecting continuation has been made in this case. The Education Act, a teacher committee model, and action related to need are identified as powerful positive forces for continuation. The most influential negative forces are communication problems, lack of ownership and discontent among teachers.

The writer recommends involving users in development, related professional development prior to and during implementation, careful monitoring, demonstrated advantage, clarity of role changes, improved communication, and support of the principal.

The writer was a teacher in the school.

Case Summary Number 5

1. A. Innovation Title: Physical Education - "Lighthouse Project"
   Type: Curriculum
   Scope: Province to School (City - Public)
   Attributes: Congruent, observable

   B. Introduction and Need: Superintendent to principal to staff. Perceptions of need varied.

2. Environment (Climate): The school had excellent facilities, a competent resource person and highly motivated opinion leaders. The school system and society were emphasizing physical education.

3. Strategy: The staff did not reach consensus. There was some antagonism about losing time for basic skill subjects. The principal decided to "give it a try for a year." Realization of benefits came gradually during the year.

4. Force Field Analysis:

A. For	B. Against
- capable resource person (demonstrations)	- tradition
- excellent facilities	- lack of competency among teachers
- teachers as opinion leaders	- view of present curriculum as permanent
- support from superintendent, community, consultant and Department	- Department seen as change agent
- flexibility	- lack of funding for implementation
- large school (more staff resources)	- timetabling problems
- prehistory (positive)	

5. Outcome: Recorded comments from teacher interviews indicate that implementation was successful in terms of both attitudinal and behavioral change. Continuation seemed assured.

6. Comment: It is observed that the innovation is different enough to attract opinion leaders yet flexible enough to allow as much control of it to users as users wish. This innovation was successful without prior in-service because of the leadership of the resource person during implementation.

   A distinction is made between movement education as the innovation and "project lighthouse" which is viewed as a public relations tool to get the public and teachers to accept the innovation.

The writer was one of the "opinion leaders." Data were collected by means of interviews.

Case Summary Number 6

1. A. Innovation Title: Physical Education - "Lighthouse Project"
   Type: Curriculum
   Scope: Province to School (City - Catholic)
   Attributes: Congruence, clarity, divisibility

   B. Introduction and Need: Consultant to principal to staff. The staff was unanimous in support.

2. Environment (Climate): The "participaction" theme in the city was identified as significant. The school system was anxious to be innovative. The school was known for an open climate and good morale.

3. Strategy: Teachers were consulted and the principal led by example. There was in-service and feedback. The previous year the innovation had been imposed on another school in the system and it was not successful.

4. Force Field Analysis:

A. For	B. Against
- involvement of principal	- crowded curriculum
- adequate time	- teacher time and effort required
- quality in-service	- teacher resistance to change
- school size (8 teachers)	- ownership ("The principal's program")
- equipment available	- prehistory (bandwagon)
- congruence (daily P.Ed. was already implemented)	- values (participation or excellence?)
- teachers were consulted	- pressure - high visibility

5. Outcome: "Unqualified success." The change in attitude and commitment among teachers is reported to have carried over to other areas of their life.

6. Comment: It is important to note that there are fourteen criteria that a school must meet to be considered a Lighthouse school -- expectations, in this respect, are clear and goals are set forth.

   The leadership and involvement of the principal initially created ownership problems but interviews indicated that ownership shifted to teachers during the year. The project "pulled the school together."

   The writer supports the "Lighthouse" concept as a way to promote implementation.

The writer is a principal in the same system.

Case Summary Number 7

1. A. Innovation Title: Physical Education - Lighthouse Project
   Type: Curriculum
   Scope: Province to School (Rural - K-12)
   Attributes: Congruence, clarity

   B. Introduction and Need: Pressure for change was created by a group in the community.

2. Environment (Climate): Prior to the innovation physical education in this small community was games oriented. The staff was stable. A new family moved into the community one member of which was a national gymnastics coach.

3. Strategy: The woman of the new family started a gym group and a fitness group that used school facilities. She also revived the Home and School Association and became its president. A large, organized group of parents appeared at the annual ratepayers' meeting to ask why there was daily P.Ed. in Divisions III and IV and not I and II.

4. Force Field Analysis:

A. For	B. Against
- environmental emphasis on fitness	- P.Ed. as games -- a low status subject
- public pressure	- practice of cancelling P.Ed. as punishment for students
- intense interest and capable leadership of Home and School president	- teachers lacked background so lacked confidence
- new curriculum consultant	- crowded curriculum
- in-service	- teachers resented parents telling them what to do
- Board approval	- decision not to force change
- grade 7-12 implementation	
- able to hire one new teacher (P.Ed. background)	

5. Outcome: All teachers agreed to implement the program after they were told the new P.Ed. teacher would teach one class per week for each teacher.

6. Comment: After one day with a P.Ed. consultant and a visit from a teacher in a Lighthouse school, the Division I and II teachers had decided not to implement the program. Division III and IV teachers decided they would. System administrators decided not to force the non-implementors.

The case writer stresses the importance of the school environment and the need for schools to correctly assess their community environment. He goes on to say that a principal has to create a climate for change, be willing to play a variety of roles depending upon the situation, and know how to work with conflict.

The writer was the principal.

Case Summary Number 8

1. A. Innovation Title: More Effective Teaching Program - Small City

   Type: Curriculum - instruction

   Scope: System

   Attributes: Divisibility, communicability, relative advantage

   B. Introduction and Need: Three teacher leaders introduced the innovation. Need was felt by teachers.

2. Environment (Climate): This city system had had a Goals Study and follow-up in terms of writing performance objectives. The next step was to search for effective teaching strategies.

3. Strategy: In the beginning, an empirical-rational strategy was used. The three leaders went to California for workshops and came back to "spread the word." After disappointing results, normative-re-educative methods were used including team building and conflict resolution.

4. Force Field Analysis:

A. For	B. Against
- goals study led to a search for more effective methodologies	- an overly-enthusiastic leadership team
- the School Act has expanded the role of administrators for supervision and evaluation	- workshops were very intense
- demand for greater school autonomy	- insecurity generated among teachers and principals
- very capable and enthusiastic teacher-leaders	- political forces (against behavior modification)
- provision for in-service	- cooperative planning was lacking
	- user readiness was assumed

5. Outcome: Approximately half of the teachers were seeing the innovation as a useful aide in classroom teaching. Principals have assumed responsibility for supervision of instruction in their schools and M.E.T. is a useful base.

6. Comment: "Change in education means change in teachers. What the teacher decides to do day-by-day with students in the classroom is what really matters and that needs to be the focus of change. Top-down strategies can implement structural change but not internalized change ...." It is further commented that program and staff development must have leadership from the top administrators -- it cannot be delegated. It is concluded that implementation strategies that are weak or not carefully structured can lead to the failure of effective and worthwhile programs.

The writer was an administrator external to the system who collected data by interviews, and print materials.

Case Summary Number 9

1. A. Innovation Title: More Effective Teaching Program - Large City Secondary

Type: Curriculum - instruction

Scope: System

Attributes: Clarity, relative advantage

B. Introduction and Need: Central office staff. Teacher perception of need was for something practical.

2. Environment (Climate): The system was concerned with questions of teacher competency and supervision. Enrolments were declining. The community was considered knowledgeable about and very interested in schools.

3. Strategy: Teachers were involved through committees in a professional development model for the system. Ten of the professional staff attended a 10-day seminar in order to be a training team for the system. Subsequent workshops were held with principals who were to assume responsibility for staff in-service.

4. Force Field Analysis:

A. For

- professional growth needs of staff
- acceptance of in-service
- staff want to be involved to avoid isolation
- in-school leadership reduced threat
- administrative commitment
- demand for high standards
- high clarity and relative advantage

B. Against

- natural hesitation for change
- "top-down"
- professional apathy
- teacher suspicion of the administration's "theme"
- diminishing dollar resources
- some community suspicion
- difficulty in articulating the meaning of quality education
- problems created by releasing staff for in-service

5. Outcome: Teacher evaluation of in-service was very positive. It is said, "One can assume that because of this teacher satisfaction there will be a positive transfer to the classroom." Principals report that instruction has improved. Most schools plan to carry on the program a second year.

6. Comment: In summary, it is stated that:

- teacher input is important in establishing ownership (commitment),
- evaluations almost always have connotations of threat,
- the in-school administrators' leadership role needs to be emphasized,
- improvements in schools will increase public confidence in schools,
- continuation barriers include difficulty in maintaining enthusiasm, concerns over resources, problems in releasing leaders from other responsibilities, and the feeling on the part of some that they have "a better way."

The writer was a secondary school principal in the system.

Case Summary Number 10

1. A. Innovation Title: More Effective Teaching Program - Large City Elementary

Type: Curriculum - instruction

Scope: School

Attributes: Complex, high risk, disconsonant, requiring extensive behavioral change

B. Introduction and Need: The principal was the change agent. Teachers initially did not see a need.

2. Environment (Climate): This urban, elementary school had a student population of 215 with an increasing native population. The staff was competent and established. Political stability and a strong economic base at both the local and provincial level were mentioned.

3. Strategy: The strategy is said to be top-down, rational-empirical and normative-reeducative. The principal was asked by a superintendent. Principal, superintendent and a teacher attended a 10-day seminar. In-service with the rest of the staff followed.

4. Force Field Analysis:

A. For	B. Against
- commitment of principal and superintendent	- top-down approach
- teachers' jobs were secure	- ownership problem
- resources were adequate	- traditional nature of staff and school
- school system was considered dynamic	- renovations to the school were very disruptive
- human relations and leadership strategies	- school enrolment increased suddenly and many pupils had difficulty learning
- perceived usefulness of innovation	- teacher insecurity regarding supervision
	- time was lacking for staff in-service

5. Outcome: Degree of success was considered to be minimal. The innovation was seen to require extensive technical and behavioral change of teachers. An additional factor was that the principal would be monitoring the actual teaching with classroom observations and this was relatively new.

6. Comment: It was felt that this was a poor choice of school for the innovation because of changes in student population, the disruption of renovations, and the fact that a climate for change had not been created. Communication about the innovation was sporadic and there were no feedback mechanisms to monitor the change process. Another complication was that the innovation was not adapted to the situation. The case ends with the following comment: "The true test of a successful change is not just observable institutional and personal change, but also the emergence of enhanced self-concept for all concerned."

The writer was the principal.

Case Summary Number 11

1. A. Innovation Title: Computer Literacy Program - Elementary
   Type: Curriculum
   Scope: City System and school
   Attributes: Centrality, complexity, congruence, visibility

   B. Introduction and Need: Central office and principal. The need is generally felt.

2. Environment (Climate): The innovation takes place in a city system that is trying to be on the forefront of new developments. It is experiencing difficulties with shifting enrolments.

3. Strategy: A system Computer Education Committee was formed in 1978 and it recommended the program. One school was chosen to be responsible for the development of the program. In anticipation of a barrier, plans are being made for the preparation of staff.

4. Force Field Analysis:

A. For	B. Against
- system support	- "top-down" decision
- politically desirable (other systems doing it)	- teacher insecurity about computers
- teacher committee	- crowded curriculum
- motivation of people involved	- perceived redundancy with high school program
- innovations perceived usefulness and specificity	- goals not specific
- reasonable time (5 year plan)	- concern about student capabilities
- time off for the teacher	

5. Outcome: It is thought that the transfer of change agents has worked well and that ownership is being adopted by the implementors.

6. Comment: The writer perceives a problem regarding power structures in the system as teachers who are competent with computers become a new elite. It is stressed that what has happened so far is an adoption decision and that prevailing barriers will have to be taken into account in formulating an implementation strategy. It is recommended that the implementation plan should include ample teacher in-service and learning packages for teachers. The innovation is considered to be central, complex, consonant, visible and requiring considerable change by implementors.

The case writer is the teacher responsible for the development of the problem.

Case Summary Number 12

1. A. Innovation Title: Computer Literacy Program

Type: Curriculum

Scope: Rural School Division

Attributes: Communicability, divisibility, reversibility, relative advantage

B. Introduction and Need: The director introduced the innovation. Most perceived a need.

2. Environment (Climate): This school division has a growing enrolment and is near a large city. Over half of the teachers live in the city and most parents work there.

3. Strategy: The Director took the initiative on a rational-empirical approach related to technology in society and unique benefits. In the process, principals and opinion leaders acted as advocates.

4. Force Field Analysis:

A. For

- support of Director and Board
- consultant available
- in-service
- committee approach
- technology in society
- a new status for teachers involved

B. Against

- "top-down"
- vague expectations
- lack of technical skills
- lack of incentives
- cultural distrust (loss of humanness)
- many, older resistant teachers

5. Outcome: The change agent role is being consciously transferred from Director to principals to staff. This school division was instrumental in establishing a Computers Committee at the regional level. There was a strong negative reaction to policy prohibiting removal of computers from schools and so the policy was changed to enable teachers to develop skills at home.

6. Comment: The case writer stated, "The extent of this change, the nature of the change, and the extent to which any individual classroom or teacher would be affected was not clear and continues to be vague."

This change process has been carefully planned to cover a 3-year period. It includes thorough professional development programs prior to implementation. It is also pointed out that there is provision for adaptation to each school and for implementation strategies to vary according to each school situation.

The writer was the director of education.

Case Summary Number 13

1. A. Innovation Title: Language Arts Curriculum
   Type: Curriculum
   Scope: City System - Division III
   Attributes: Congruence, clarity

   B. Introduction and Need: Consultant. Need was perceived by most users.

2. Environment (Climate): This innovation occurred in a city system that has a reputation for leadership. Financial support is good. There was dissatisfaction among teachers regarding the provincial curriculum guide.

3. Strategy: The strategy has been described as a "consensus strategy" aimed at involvement and ownership. The proposal went from the Coordinator to Superintendents to Executive Council and then to the Board.

4. Force Field Analysis:

A. For	B. Against
- perceived inadequacy of the provincial curriculum	- teacher skepticism about the value of "a curriculum"
- desire for a more clearly-defined curriculum	- teacher norms of autonomy and not being involved in writing
- public wish for emphasis on English	- size of organization (158 teachers)
- prehistory - positive	- "product-mindedness"
- leadership - expertise	- lack of commitment to process
- financial support	- discomfort with conflict

5. Outcome: The development process was "by the book." There is concern about teacher perceptions as a basis for evaluation. It is suggested that there should be classroom observation to determine the degree of implementation.

6. Comment: The case writer has identified three dilemmas:

   1. Theory - practice -- Problems developed regarding demands on teacher time, communication, and variation in teacher skills, maturity and commitment. These difficulties made it impossible to put theory into practice.
   2. Control -- The question of autonomy for teachers and individualization for students needs to be weighed against student rights for quality and equality of opportunity which suggest external controls.
   3. Internal commitment of teachers is considered crucial for school effectiveness but how can it be measured?

The writer was a grade 7-8 teacher in the system.

Case Summary Number 14

1. A. Innovation Title: Language Arts Curriculum
   Type: Curriculum
   Scope: City System - Division III
   Attributes: Congruence, clarity

   B. Introduction and Need: Consultant. Need was perceived only by users at the grades 7 and 8 level.

2. Environment (Climate): This innovation occurred in a city system that has a reputation for leadership. Financial support is good. There was dissatisfaction among teachers regarding the provincial curriculum guide.

3. Strategy: The proposal went from the Coordinator to Superintendents to Executive Council and then to the Board. Foundation papers about the nature of learners, etc. were prepared by committees and discussed at length. Committees of teachers prepared units around themes for field testing.

4. Force Field Analysis:

   A. For

   - high degree of involvement in development of the curriculum
   - field testing and minor revisions
   - some funds for materials
   - provision for continuous revision
   - system and zone workshops
   - multi-text approach (choice)
   - mechanisms for monitoring

   B. Against

   - participation dominated by a "vocal few"
   - field testing was rushed
   - funds for purchasing texts yet the approach was multi-text
   - lack of clarity regarding revisions to units
   - some meetings of 80-90 teachers had negligible return
   - some books for key concepts were not available
   - early critical responses were misinterpreted by central office staff

5. Outcome: It is stated that the element of trust and openness diminished after implementation started and frustrations regarding lack of materials surfaced.

6. Comment: A practical barrier was noted in that grade nine teachers had some spares to work on the program and grade seven and eight teachers did not. Some teachers are reported to have seen no need for the innovation and thought development was a chore taking up limited time. It is noted that there was some feeling that curriculum development should be done by the Department of Education.

The writer was a high school teacher in the system.

Case Summary Number 15

1. A. Innovation Title: Alternate Primary School

Type: Organizational - Curriculum

Scope: School (City - Public)

Attributes: Congruence, centrality, high complexity, visibility

B. Introduction and Need: Superintendent. Selected staff perceived a need.

2. Environment (Climate): A new superintendent from Britain was appointed. In the system there was an old grade 1-6 school with a declining enrolment.

3. Strategy: The superintendent and Board chairman were "idea champions." Staff wanted to be at the school, visited schools in North Dakota, Toronto, Denver, and Wales, had a year to prepare and received an innovative grant for materials. Ownership transferred to the staff.

4. Force Field Analysis:

A. For	B. Against
- superintendent's ideas and powerful personality	- mixed feelings of Board
- careful selection of staff	- most of central office staff was negative
- planning time (1 year)	- no involvement of teachers and principals in the system
- small enrolment	
- support of parents	
- congruence with societal values (early 70's)	

5. Outcome: The implementation was successful. The case writer believes that the fact the innovation depended on a few, specific people was its strength and also its weakness. Two of the teachers fell in love and this is one reason the staff could not be "transplanted" to another faculty.

6. Comment: The innovation was implemented for four years. During this time every primary teacher in the system had been required to spend three days in the alternate school. There was some jealousy due to high visibility.

Continuation was adversely affected by the superintendent leaving, continued enrolment decline, demand of the fire department for major renovations, and failure to relate the innovation to the total system in the beginning. In addition, the Board chairman left and the Board shifted to non-support. The larger environment was changing to a "back to the basics" emphasis. There was no plan for continuation.

The writer was a teacher at the school.

Case Summary Number 16

1. A. Innovation Title: Native Community School

Type: Organizational and Curriculum

Scope: School

Attributes: Centrality, visibility, required a great deal of behavioral change, complexity

B. Introduction and Need: Provincial government. Staff perceived and identified need.

2. Environment (Climate): The school, prior to the innovation, had more than fifty percent native students in a low socio-economic area. The school was over-crowded.

3. Strategy: There had been staff initiative prior to government action in that there was a survey, problem identification and a proposal put forward for improved pupil-teacher ratio, aides and curriculum change. This school was later identified by the Board as a logical choice for the innovation. Basically the strategy was problem-solving.

4. Force Field Analysis:

A. For	B. Against
- provincial government philosophy and financial support	- prejudice on the part of some of the Board, some teachers, some parents, and some local groups
- teacher awareness of need for improvement and initiative	- crowded facilities for daytime programs
- Division Board and administrators	- difficulty of including other agencies
- parish	- minimal parental involvement
- some parents	- behavioral change required (role of teaching associates, etc.)
- in-service of 5 days was provided	- political differences

5. Outcome: The Board and government officials agreed to focus on the total community, not just native people. After five months the implementation was considered to be in early stages.

6. Comment: It was concluded that the program needs time to mature. Public support was lacking and there had been little participation in program expansion. Community resources were not utilized enough.

The case writer spent three weeks in the community. He attributed resistance and hostility to a lack of communication as people did not understand the philosophy of the program. The case writer concludes that there needs to be a plan developed for self-renewal and continuation.

The writer was a principal from outside of the system.

Case Summary Number 17

1. A. Innovation Title: Alternative School - Enrichment
   Type: Curriculum - total program
   Scope: School
   Attributes: Centrality, complexity, congruence, visibility

   B. Introduction and Need: Director to principal to staff. Some users perceived a need.

2. Environment (Climate): The public demand for alternative education and declining enrolments were considered significant factors. The school was located in an upper socio-economic area and demand for quality education was high.

3. Strategy: The superintendent and principal visited a similar school in another city. These people plus the staff, and resource persons formulated goals for the alternative program. One year was given to a pilot program. The community was invited to react to the tentative program.

4. Force Field Analysis:

A. For	B. Against
- North American trend for alternative schooling	- pressure from the public was not specific
- success in other places	- community need was as perceived by administrators
- declining enrolments	- financial loss if not successful
- demand by the public and supportive community	- adverse career effects on teachers if not successful
- administrative and Board support	
- possible financial benefit	
- "We have to try something."	

5. Outcome: "The general atmosphere and operation of the school was very positive. Both student and teacher morale was high ... All student performance goals were being met with relative success."

   By mid-January of the pilot year signs of stress began to appear among staff.

6. Comment: The school was closed after the pilot year. The writer felt the staff was overworked and this led to conflict. Two of the staff resigned. There were not enough referrals of students from other schools who wished to enroll. Some principals from other schools saw the program as a model for professional development of staff rather than as an alternative program. There was not enough time for the program "to take hold" so that there was evaluation prior to implementation. The innovation had not been seen clearly in relation to the total system.

The writer was a vice-principal in the system.

Case Summary Number 18

1. A. Innovation Title: Open Area School - Rural

   Type: Organizational - curriculum

   Scope: School

   Attributes: Centrality, complex, great behavioral change required

   B. Introduction and Need: Director and Board. Users did not see a need.

2. Environment (Climate): The innovation took place in a growing, rural community of about 2000 people. The school staff included 15 teachers and an aide. There were 270 pupils K-6.

3. Strategy: It appears to have been a power-coercive decision by the Board with little, if any, consultation with teachers or community. It was felt the open area would accommodate more pupils with less space and, therefore, be cheaper.

4. Force Field Analysis:

A. For	B. Against
- decision to build a new school and to look at alternatives	- traditional, established teachers
- Board chairman wanted something unique - monumental	- negative reaction to the open school visited
- open areas are advocated	- community was skeptical
- strong selling job by professional staff of schools visited	- feelings of teachers were not taken into consideration
	- the school was crowded from the time it opened
	- distractions and teacher stress

5. Outcome: Results of C.T.B.S. were positive and their case writer feels there has been good teaching and genuine concern for pupils, but: "It is obvious success has come about in spite of the Open Area, not because of it."

6. Comment: By the time the school opened, the two innovators, the Board chairman and the superintendent, had retired. The new superintendent and principal had to assume ownership. Basically the school continued to operate in a traditional manner. Portable chalkboards and book cases were put into place as partitions. Teachers were concerned about what was happening but felt relatively helpless. There was no provision for in-service of a thorough, on-going nature.

The writer was a principal in an adjacent school division.

Case Summary Number 19

1. A. Innovation Title: Environmental Education
   Type: Curriculum
   Scope: Province - K-12
   Attributes: Low visibility, congruence, lack of clarity

   B. Introduction and Need: Departments of Education and Environment. There was a generally felt need in society.

2. Environment (Climate): The Department of Environment was established in 1972 in response to growing concerns about the environment. The economy was buoyant due to increased resource development.

3. Strategy: Included were regional conferences, a booklet distributed to schools, consultants released from classrooms for ten days, and a provincial consultant. Feedback from schools was solicited. Primarily rational-empirical.

4. Force Field Analysis:

A. For	B. Against
- growing awareness of environmental concerns (media)	- no clear model for implementation
- provincial government support	- lack of knowledge of curriculum content
- congruence to personal values	- overcrowded curriculum
- reasonable pressure	- new idea of interdisciplinary, integrated
- regional consultants	- lack of commitment at regional level
- identification with leaders	- few funds for local development
	- pre-service at only one university

5. Outcome: The implementation was considered moderately successful. It continues to struggle with minimum involvement of Department although interested teachers promote it.

6. Comment: One implication of this case study stated by the writer is: "Although each innovation requires a unique but flexible strategy for its implementation, a well thought-out plan of how to best put the change into effect needs to be developed. The plan should anticipate the positive forces for change and the barriers against and attempt to capitalize on the former and minimize the effect of the latter." It is also concluded that innovations need to be adequately funded over at least a three year period.

The writer was a member of the provincial committee responsible for planning implementation.

Case Summary Number 20

1. A. Innovation Title: Space Science - 1979
   Type: Curriculum
   Scope: Province - Grade 9
   Attributes: Congruence, low visibility

   B. Introduction and Need: Department of Education

2. Environment (Climate): The old program was considered unsatisfactory in terms of unclear goals and a textbook orientation. The committee that developed the curriculum felt no responsibility for implementation.

3. Strategy: There was a needs study then a committee of teachers to produce a curriculum guide. In February there was a seminar for 40 teachers who were to field test. Field testers were "to sell the program."

4. Force Field Analysis:

A. For	B. Against
- feedback from teachers indicated a need for a new program	- field testers had to sell the program yet had no power
- curriculum committee system	- time was too short
- field testing	- lack of in-service
- matrix sampling reduced time commitment for teachers	- tried to change attitudes by reading
- good relations between Department and field testers	- goals and objectives were not matched (affective area was neglected)
- congruence - "hands on", etc.	- the course was fragmented for field testing

5. Outcome: One consultant said, "Sure the course is being implemented -- on the surface. Who knows what goes on in the classrooms?"

6. Comment: The case writer states, "The Department, which has both authority and the ability to acquire experts, places the burden of orientation and explanation on the field testers. These people have some knowledge, but it is not always consistent with the goals of the curriculum and they have no power to approach teachers."

   It is concluded that re-educative strategies are necessary, followed by persuasion.

The writer was a member of the Provincial Curriculum Committee.

PART III C. SUMMARY OF CASES

The twenty cases are summarized, according to the selected framework for analysis, in Tables 8, 9 and 10. In Table 8 cases are grouped according to the topic of the innovation under headings special education (Spec. Ed.), physical education lighthouse program (P.Ed.), more effective teaching (M.E.T.), computer literacy (Comp.), division III English (Eng.) and alternative schools (Alt. Sch.). The subject of case 18 is an open area school (O.A.) and curriculum change at the provincial level is examined in cases 19 and 20. In Table 9 cases are presented in terms of the case writer's perception of their degree of success. In Table 10 a categorization of factors listed in the force field analysis is presented. Each of these Tables will be referred to frequently as a basis for the comments which follow under the headings of the framework. Where appropriate, other information related to the Saskatchewan scene will be reported.

1. Need

It can be seen from Tables 8 and 9 that the need for the innovation was identified by the users in 4 successful and 4 unsuccessful cases. The need was perceived by users, when someone else brought it to their attention, in 15 cases and in 4 others it was recognized to a limited extent. In only one unsuccessful change was it said the users did not see a need for the innovation.

Sources of change can frequently be traced to changes in the environment as was noted in earlier sections of this paper. The Education Act (1978) requiring provision in schools for exceptional children and the major emphasis in our society on good health and physical fitness

TABLE 8

SUMMARY OF CASE ANALYSES

KEY:

Y = yes N = no
? = uncertain - = not mentioned

FACTORS	CASES																				Total Y's
	Spec. Ed.				P.Ed.			M.E.T.			Comp.		Eng.		Alt. Sch.			O.A.	Prov.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
NEED - Identified by users	Y	N	Y	N	N	Y	N	Y	Y	N	N	Y	-	-	-	Y	-	N	-	Y	8
- Perceived by users	Y	?	Y	Y	?	Y	?	Y	Y	Y	Y	Y	Y	?	Y	Y	Y	N	Y	Y	15
INTRODUCTION - Involvement	Y	N	Y	N	Y	Y	Y	N	?	N	Y	Y	Y	Y	Y	?	N	N	-	?	10
- Ownership	Y	N	Y	N	?	Y	?	?	?	N	Y	Y	Y	Y	Y	Y	-	N	N	N	9
ENVIRONMENT - System support	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	19
- External support	Y	?	-	Y	Y	Y	Y	?	-	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	14
CLIMATE - Positive	Y	N	N	N	Y	Y	Y	-	-	Y	Y	Y	-	-	Y	-	Y	?	-	-	9
- Open	Y	?	Y	-	Y	Y	Y	-	-	N	Y	Y	-	-	Y	Y	Y	-	-	-	10
- Temporary systems	-	Y	-	Y	Y	-	Y	Y	-	-	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	14
- Mechanisms for problem solving	-	Y	Y	-	Y	-	Y	Y	-	Y	-	Y	Y	Y	-	Y	-	-	Y	Y	12
ATTRIBUTES - Goals explicit	N	N	N	N	Y	Y	Y	Y	Y	-	N	Y	Y	Y	Y	-	Y	N	N	N	10
- Role awareness	Y	N	N	N	Y	Y	Y	Y	Y	Y	-	?	Y	Y	Y	Y	Y	N	N	N	12
STRATEGIES - Inservice - prior	Y	N	Y	N	-	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	15
- Inservice - during	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	-	-	Y	-	Y	N	N	Y	14
- Interaction	Y	?	-	?	Y	Y	Y	?	Y	-	Y	Y	Y	Y	-	-	Y	-	-	N	10
- Adaptation	Y	Y	Y	Y	Y	-	Y	N	-	Y	Y	Y	Y	Y	-	-	-	Y	-	-	12
- Plans for barriers	-	N	-	N	-	-	Y	N	-	-	Y	Y	-	-	N	-	-	N	N	-	3
ADMINISTRATION - Principal support	Y	Y	Y	N	Y	Y	Y	?	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	-	13
- Incentives	-	?	-	N	?	-	-	-	Y	-	Y	Y	Y	Y	-	-	-	-	-	-	5
- Policy	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	-	18
- Funds	Y	Y	N	-	-	-	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	N	N	-	12
MATERIALS - available	-	-	N	N	Y	Y	Y	-	-	-	Y	Y	Y	Y	Y	-	Y	-	Y	Y	11
TIME LINE - 1½-3 years	-	-	N	N	Y	-	Y	-	-	-	Y	Y	Y	-	Y	-	N	-	N	N	6
OVERLOAD - identified as a problem	Y	-	-	-	-	-	Y	-	-	Y	Y	-	Y	Y	-	-	Y	-	Y	-	8
SUCCESS	Y	?	Y	N	Y	Y	Y	?	?	N	Y	Y	Y	Y	Y	?	N	N	?	N	10

TABLE 9

A SUMMARY OF CASE ANALYSES
FACTORS IN TERMS OF SUCCESS

KEY:

Y = yes N = no
? = uncertain - = not mentioned

FACTORS	CASES																				
	Successful (1)										Doubtful (2)					Unsuccessful (3)					Total Y's
	1	3	5	6	7	11	12	13	14	15	2	8	9	16	19	4	10	17	18	20	1-(2+3)
NEED - Identified by users	Y	Y	N	Y	N	N	Y	-	-	-	N	Y	Y	Y	-	N	N	-	N	Y	4-4
- Perceived by users	Y	Y	?	Y	?	Y	Y	Y	?	Y	?	Y	Y	Y	Y	Y	Y	Y	N	Y	7-8
INTRODUCTION - Involvement	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	?	?	-	N	N	N	N	?	10-0
- Ownership	Y	Y	?	Y	?	Y	Y	Y	Y	Y	N	?	?	Y	N	N	N	-	N	N	8-1
ENVIRONMENT - System support	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	-	10-9
- External support	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	?	?	-	Y	Y	Y	N	Y	Y	-	9-5
CLIMATE - Positive	Y	N	Y	Y	Y	Y	Y	-	-	Y	N	-	-	-	-	N	Y	Y	?	-	7-2
- Open	Y	Y	Y	Y	Y	Y	Y	-	-	Y	?	-	-	Y	-	-	N	Y	-	-	8-2
- Temporary systems	-	-	Y	-	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	Y	Y	-	Y	-	Y	7-7
- Mechanisms for problem solving	-	Y	Y	-	Y	-	Y	Y	Y	-	Y	Y	-	Y	Y	-	Y	-	-	Y	6-6
ATTRIBUTES - Goals explicit	N	N	Y	Y	Y	N	Y	Y	Y	Y	N	Y	Y	-	N	N	-	Y	N	N	7-3
- Role awareness	Y	N	Y	Y	Y	-	?	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	N	N	7-5
STRATEGIES - Inservice -prior	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	N	Y	Y	Y	N	9-6
- Inservice - during	Y	Y	Y	Y	Y	Y	Y	-	-	Y	Y	Y	-	-	N	Y	Y	Y	N	Y	8-6
- Interaction	Y	-	Y	Y	Y	Y	Y	Y	Y	-	?	?	Y	-	-	?	-	Y	-	N	8-2
- Adaptation	Y	Y	Y	-	Y	Y	Y	Y	Y	-	Y	N	-	-	-	Y	Y	-	Y	-	8-4
- Plans for barriers	-	-	-	-	Y	Y	Y	-	-	N	N	N	-	-	N	N	-	-	N	-	3-0
ADMINISTRATION - Principal support	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	Y	-	-	N	Y	-	-	-	10-3
- Incentives	-	-	?	-	-	Y	Y	Y	Y	-	?	-	Y	-	-	N	-	-	-	-	4-1
- Policy	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	-	10-8
- Funds	Y	N	-	-	Y	Y	Y	Y	Y	Y	Y	Y	-	Y	N	-	Y	Y	N	-	7-5
MATERIALS - available	-	N	Y	Y	Y	Y	Y	Y	Y	Y	-	-	-	-	Y	N	-	Y	-	Y	8-3
TIME LINE - 1½-3 years	-	N	Y	-	Y	Y	Y	Y	-	Y	-	-	-	-	N	N	-	N	-	N	6-0
OVERLOAD - identified as a problem	Y	-	-	-	Y	Y	-	Y	Y	-	-	-	-	-	Y	-	Y	Y	-	-	5-3
SUCCESS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	?	?	?	?	?	N	N	N	N	N	10-0

TABLE 10

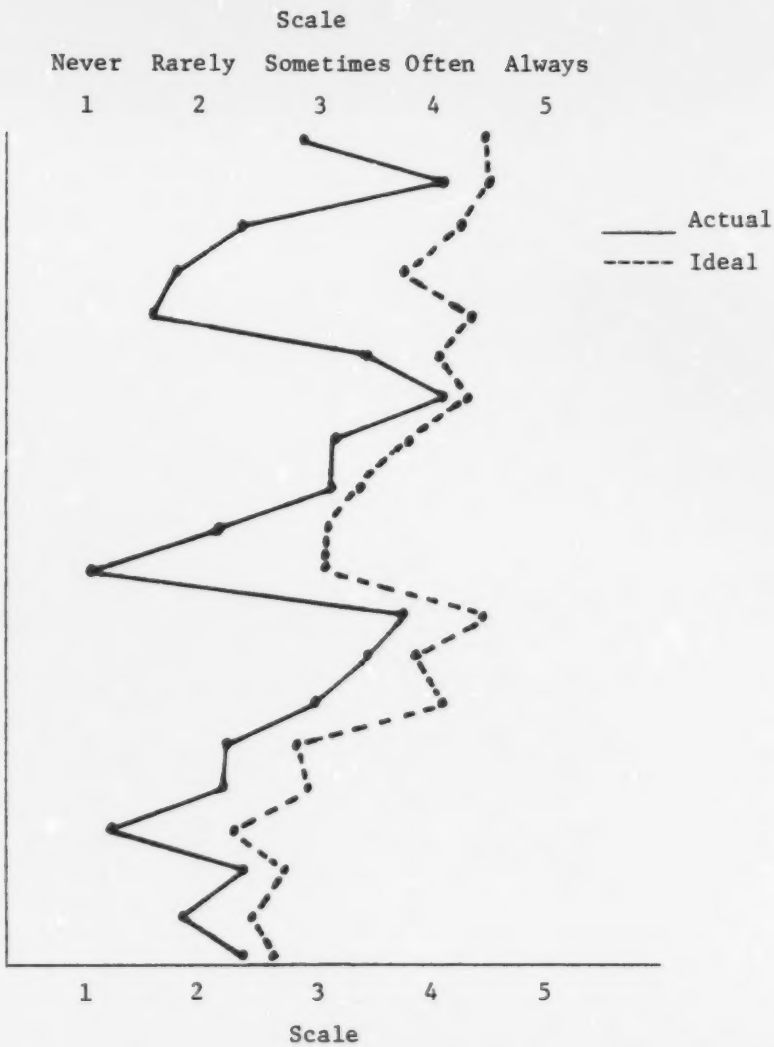
FACTORS CATEGORIZED - WRIGHT'S MODEL ADAPTED

Category		Cases	
		Force for	Force against
I People	- Users	1,3,4,9,10,13,15,16,20	2,5,7,10,12,13,18,19
	- Students	1,3	11
	- Administrators	3,6,9,10,12,15,16,17	15
	- Resource persons	2,5,8,9	
	- Exogenous - parents	2,4,5,7,9,13,15,17	3
	- board	1,2,3,5,7,11,12,16,17,18	15
II Curriculum	Attributes - anatomical		3
	- ascribed	1,3,4,5,6,9,10,11,13,17,18,19,20	1,4,6,9,11,12,14,16,17,20
III Strategies	Leadership	5,8,13,19	
	Inservice - general	2,3,6,7,8,9,12,14,16,18	2,8,18,19,20
	Time	6,11,15,20	3,4,10,14,20
	Interaction	1,10,14,20	8,14
	Involvement	4,6,11,12,14,20	2,4,6,8,10,15,16,18,19,20
	"Top-down"	4	4,7,9,10,11,12
	Field Testing	14,19,20	
IV Organization	Reputation	10	
	Size	15,17	13
	Facilities	5,6	10,16,18
	Relationships	5,8,9,12	3,7,8,12,13,14
	Staffing	2,3,5,7	1,9
	Prehistory	5,8,13	1,6
V Intervening Endogenous	Finance	10,13,14,17	1,5,9,17,19
	Communication		4,17
	Overload		1,5,6,7,11,19
	Role clarity		10
VI Intervening Exogenous	Provincial government	4,8,16,19	14
	Community	7,11,12,15,16,19	2,8,9,10,12,16,18,19
	School - teacher beliefs	11	1,2,3,5,6,7,8,9,11,12,13,16,17,18

TABLE 11

TEACHER VIEWS OF PROGRAM
IN A RURAL SCHOOL DIVISION

Program The school program provides for:	
various ability levels	1
academic courses	2
the academically talented	3
the handicapped	4
slow learners	5
music education	6
a band program	7
fine arts	8
the teaching of French	9
the teaching of Ukrainian	10
computer literacy	11
basic skills	12
extra-curricular activities	13
guidance services	14
industrial arts	15
career awareness	16
work-study program	17
post-secondary education	18
adult life	19
business education	20



provide supportive environmental conditions for the first 7 cases yet only in 3 of these was the need identified by teachers. Teacher surveys being done as a part of planning studies in rural divisions indicate that teachers see a need for many program changes. Table 11, for example, illustrates that teachers see a need for changes in relation to programs for exceptional children (including the gifted), in computer programs, in technical-vocational programs and in the overall adequacy of school as preparation for adult life. All of the differences in Table 11 are significant in a statistical sense.[1.] It is clear that teachers, when given an opportunity, do identify program needs in schools.

2. Introduction

Several people are involved in the introduction of most changes yet usually one individual or group is considered primarily responsible. Primary responsibility for the introduction of the 20 innovations under review was assumed by the director of education in 6 cases, by teachers in 3 cases, by principals in 3 cases, and by consultants in 3 cases. Three changes were initiated by the Department of Education, one by a community group and one by a board of education. It is interesting to note that, of the 4 special education cases, two came from teachers, one from a director and one from a consultant. It is more important to see that the two that came from teachers were considered successful and the other two were not.

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1. Reported here are findings from Newton, Sackney and Wilson, "A Planning Study of the Sturgis School Division," 1982. See also Guy, Dibski, Lucas and Newton, "A Planning Study of the Kerrobert School Division," 1982. Preliminary findings from studies being done in Radville, Gull Lake and Eastend Divisions are similar to those reported above.

Tables 8 and 9 reveal that involvement of users in the introduction of an innovation and sense of ownership are characteristic of successful changes, whereas, they were problem areas in unsuccessful cases. The review of cases indicates, however, that not all involvement is considered beneficial.

Planning studies being done in rural divisions indicate that teachers feel uninvolved in decision-making especially at the division level (Newton et al, 1982).

3. Environment

Table 8 shows that system support was perceived as a positive factor in 19 of the cases. Table 9 indicates that 9 successful changes felt external support, whereas, only 5 of the unsuccessful changes benefited from external factors. External support seemed strongest for the changes in physical education and most doubtful for the more effective teaching program.

Further insight into the environment for schooling in Saskatchewan was gained through the work of the Minister's Social Studies Task Force (Newton, 1981). The Task Force report indicates that people generally have high expectations for schools but that communities vary greatly in terms of what they want of their schools. Some communities want to have controversial issues discussed in classrooms and some do not. Some communities are ready for drug, alcohol and sex education programs and some are not. In some communities parents are actively involved in the school and in some they are not. People in some places say that simulations are dangerous. Some parents do not want to have their children engage in critical thinking. It is apparent that communities in this

province are increasing in diversity, and that schools are becoming more and more political. Increasing diversity combined with increasing politicization raises the question of equality of opportunity. The Task Force recommended that:

> ... school trustees and administrators devote increased effort to their role as community leaders so that communities will support an education that is in keeping with the rights of children and the needs of the world. (Newton, 1981, p. 10)

A further consideration regarding environment is related to the fact that in Saskatchewan many students attend small schools in quiet, relatively homogeneous communities while those in charge of schools feel increasingly helpless in the face of powerful external factors such as declining enrolment, teachers salaries, and rising fuel costs. If impetus for change usually comes from conflict within large schools and/or heterogeneous communities, what is to be the impetus for change in rural, Saskatchewan schools? (For elaboration see, Newton, 1980 - Appendix A)

Table 10 reveals that 14 cases were affected negatively by teacher beliefs which are intervening exogenous variables. The beliefs are related to influences teachers feel from the world around them. Comments from cases reflect teacher beliefs about labelling students, autonomy, lowering standards, and P.Ed. as "games." Words such as "tradition," "insecurity," "suspicion," "apathy," "prejudice" and "product-mindedness" appear in the case studies.

4. Climate

The word "positive" was used to describe 7 successful cases and "open" was applied to 8 successful cases as shown in Table 9. On the other hand, only 2 of the unsuccessful cases were said to have positive

and/or open climates. The provision of temporary systems and mechanisms for solving problems is the same for both successful and unsuccessful being 70% and 60% respectively. The temporary systems had to do with the hiring of consultants (Cases 5 and 7), providing for practice on computers at home (Case 12), or having pilot projects (Cases 19 and 20). The mechanisms for problem solving, as in Case 2, were providing for feedback and monitoring of the change process.

Additional information about school climate is provided in Table 12 (Newton, 1982). It can be seen that most "actual" behavior is close to "seldom" whereas the "ideal" is usually considered to be "often." According to teacher perception in this and other planning studies school climate deserves increased attention and concerted effort for improvement.

5. Attributes

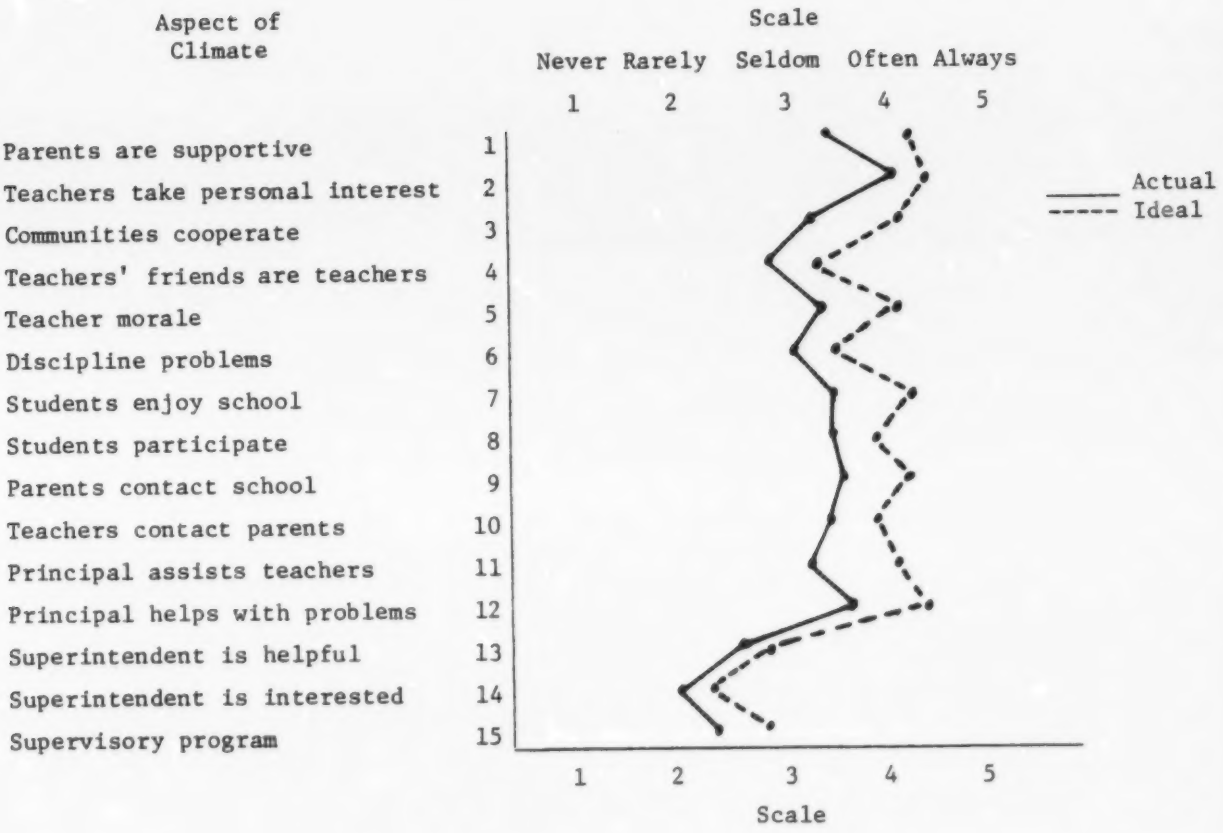
Table 8 shows that goals were explicit in 10 cases and users were aware of required role changes in 12 cases. Again (Table 9) successful cases scored better on these points than unsuccessful ones did. The ascribed features of the innovation (attributes) were considered positive forces in 13 cases and negative forces in 10 cases as indicated in Table 10.

There is no question that the attributes of an innovation are important variables in a change process. According to Table 10 attributes had more total effect (for and/or against) than any other category of factors.

The meaning of change needs to be emphasized at this point. Apparently meaning is not clear in many implementation efforts. Goals were vague in all 4 cases dealing with special education. In the more effective teaching program teachers saw some practical strategies for improving

TABLE 12

TEACHER VIEWS OF CLIMATE
IN A RURAL SCHOOL DIVISION



instruction and principals saw a program upon which to launch classroom supervision. In two cases of alternative schools (15 and 17) the innovation was discontinued for reasons totally unrelated to the innovations themselves.

6. Strategies

It can be seen from Table 8 that in-service programs were provided prior to implementation in 15 cases but that there were specific plans for dealing with anticipated barriers in only 3 cases. Again, in each of the five aspects of strategy, the successful cases had more "yes" responses than did unsuccessful ones.

Several comments should be made about strategies as reported in the case summaries. In several cases (2, 3 and 4 for example), power-coercive strategies were used in the early stages of the change process. Often the strategy changed as the implementation proceeded from power-coercive to rational empirical and/or normative re-educative (Case 8). It appears that opportunities for interaction and adaptation receive only limited attention.

Professional development activities in a school division are an integral part of a change process and should be recognized as such. Table 13 is a typical reaction of rural teachers in planning studies to professional development. Discussion with teachers and administrators in such rural divisions indicates that well-intentioned people are finding present provisions for professional development grossly inadequate.

Another reaction of 70 teachers in a comprehensive high school to the process of program change is shown in Table 14.

TABLE 13

TEACHER VIEWS OF PROFESSIONAL DEVELOPMENT
IN A RURAL SCHOOL DIVISION

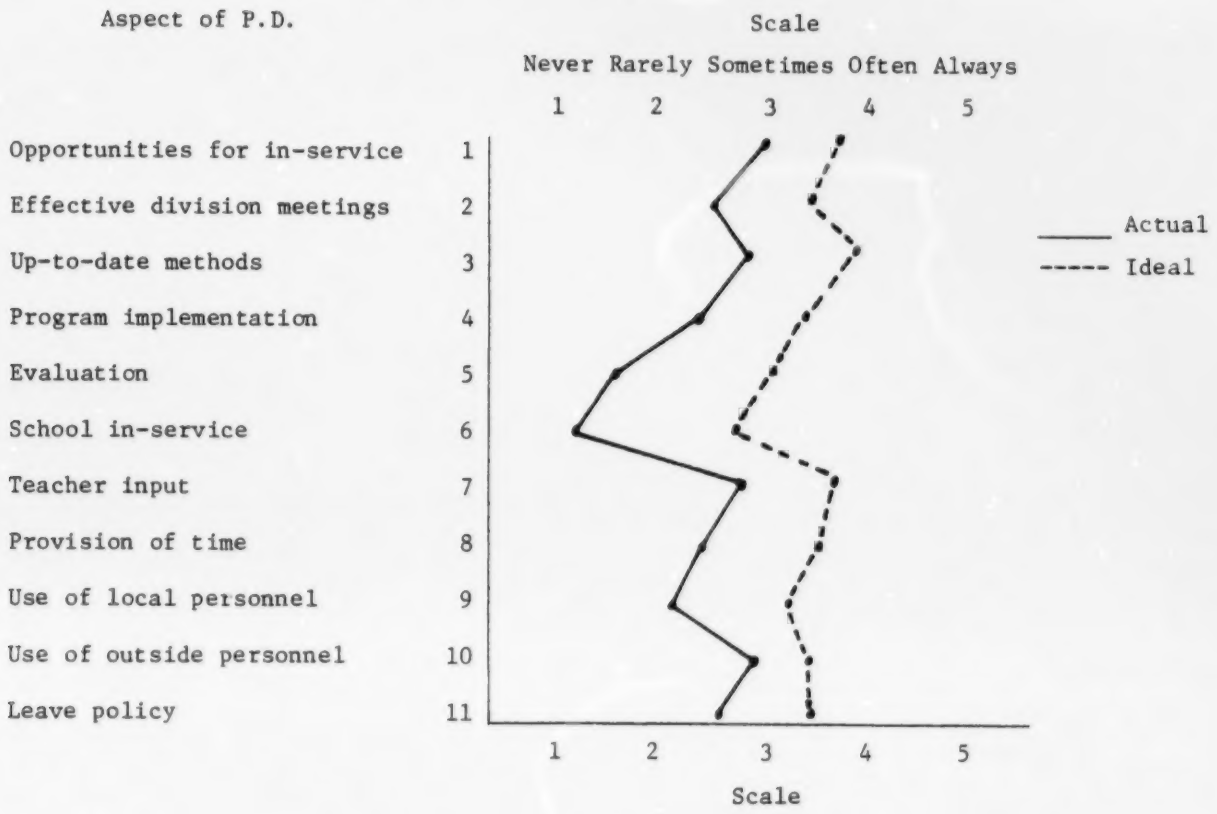


TABLE 14

TEACHER VIEWS OF THE
PROCESS OF PROGRAM CHANGE

When New programs are introduced the following is apparent:	WHAT IS	Never	Some	Moder.	Frequen.	WHAT OUGHT	DIFF IN	
	MEANS	1	2	3	4	MEAN	MEAN	P
1. Effort to adapt them to needs of school & community	2.90					4.48	1.58	.000
2. Program goals are clear	2.73					4.68	1.95	.000
3. Teachers are convinced of value before implementation	2.72					4.61	1.89	.000
4. Field testing before implementation	2.19					4.30	2.11	.000
5. Guides and materials prepared and distributed in advance	2.28					4.55	2.27	.000
6. Inservice and funding available to pilot tests	2.48					4.64	2.16	.000
7. Support is given by								
A. .....other teachers	2.93					4.21	1.28	.000
B. .....Dept. Heads	3.23					4.36	1.13	.000
C. .....Administration	3.36					4.40	1.04	.000
D. .....Consultants	3.63					4.43	.80	.000
E. .....Central office	3.00					4.43	1.43	.000
F. .....Dept. of Education	2.61					4.34	1.74	.000
8. Programs are initiated by Departments and teachers with Central office consultation	3.07					4.36	1.29	.000
9. Programs are initiated solely by external authorities	2.64					1.78	.86	.000
10. Different Depts. plan and coordinate their efforts	2.44					4.15	1.71	.000
11. Local community has input	1.64					3.28	1.64	.000
12. Sufficient prep. time is given to implementers	2.04					4.39	2.35	.000
13. Teachers concerned have input prior to programs being phased out	2.44					4.40	1.96	.000

7. Administration

Principal support was felt in all 10 successful changes and in only 3 unsuccessful changes as shown in Table 9. Also in that table it can be noticed that incentives are seldom considered, policy is usually supportive, and funds are sufficient about 60% of the time.

There were new principals in 3 of the 4 cases dealing with special education and in the fourth there was an influential, new superintendent. In cases 19 and 20, dealing with provincial curriculum, the Department of Education was seen as non-supportive.

8. Materials

Materials were available in 8 successful cases and 3 unsuccessful ones according to Table 9. In case 14, where the change process was very carefully planned, materials for implementation were not always available.

The importance of materials was emphasized in the Report of the Social Studies Task Force (Newton, 1981). In that report a provincial materials "clearing house" was recommended to overcome the problem of having a provincial curriculum dependent upon the decisions of division boards for related materials.

9. Time Line

In 6 successful cases the change process was planned for a 1½ to 3 year period (See Table 9). In 4 of the unsuccessful cases time was labelled a negative factor and in 6 others it was not mentioned.

10. Overload

Overload was identified as a problem in 8 of the 20 cases as can be seen from Table 8. Five of these cases were successful and three were not. Table 10 indicates that overload was seen as a negative factor in 6 cases.

Summary

It can be seen from Table 10 that many factors, such as users, ascribed attributes, inservice, involvement, interpersonal relationships and the community, can have either a positive or a negative effect. The factors which affected 10 or more of the 20 cases are users, boards of education, attributes of the innovation, inservice, involvement, interpersonal relationships, the community and teacher beliefs. The factors affecting the most cases (5 or more) positively are users, administrators, parents, boards, attributes, inservice, involvement and the community. Factors which affected 5 or more cases negatively are users, attributes, inservice, time, involvement, "top-down" strategies, interpersonal relationships, finance, overload, the community and teacher beliefs.

Table 8 indicates that many of the factors in the framework did receive attention in the cases analyzed. The factors with the largest number of "yes" marks are, in order, system support (19), policy (18), perceived need (15), inservice prior to implementation (15), external support (14), temporary systems (14), and inservice during implementation (14). Factors receiving the least attention are plans for barriers (3), incentives (5), time lines (6), and overload (8).

Changes perceived as successful can be compared with those seen as unsuccessful in Table 9. Successful change processes are characterized (at least in 8 of 10 cases) by involvement of users in the introduction of the innovation, system support, support of the principal, related policy, ownership, external support, an open climate, inservice during implementation, opportunities for interaction, adaptation and availability of materials. Unsuccessful changes (in at least 8 of 10 cases) were known to have perceived need, system support, and related policy but obviously more was required for successful change in those cases.

PART IV DISCUSSION AND GUIDELINES

The review of literature and the framework used for the analysis of case studies both indicate that curriculum implementation needs to be examined in relation to the total educational-environmental scene. More specifically, Fullan (1979) states that the five components of implementation are structural-organizational aspects, role-behavioral changes, materials required, knowledge-understanding, and internalization-commitment. It is certainly the conviction of the writer that organizations and individuals within them must change together in mutually-supportive ways.

Guidelines for improving curriculum implementation can be found in the literature. Dow and Whitehead (1981), after a study of barriers to implementation in Ontario, recommend:

1. Establishing communication channels among central office staff, principals and teachers,
2. Providing time for teachers to plan,
3. Giving principals more information prior to implementation,
4. Including more suggestions for evaluation in curriculum guides,
5. Clearly specifying the principal's role,
6. Providing more opportunity for teachers to learn about guides,
7. Providing workshops and inservice,
8. Increasing communication between resource persons and teachers,
9. Increasing communication between principals and teachers,
10. Making school organizations more flexible to accommodate implementation,
11. Providing feedback to teachers,
12. Central office staff provide motivation for teachers,
13. Principals provide sufficient resources,

14. Clearly defining the role of consultants,
15. Principals clearly articulating expectations,
16. Providing time to plan for implementation,
17. Boards provide adequate resources,
18. Improving communication between principals and superintendents (directors),
19. Clearly specifying the superintendent's (director's) role, and
20. Clearly and specifically outlining implementation procedures.

They stress that implementation requires careful planning in order to incorporate strategies to surmount barriers. Miller and Wolf (1978) believe that a change model should be based upon a gradualistic time perspective, as opposed to grandeur, and a social systems analysis. They elaborate by defining nine elements: amplifying the close, immediate concerns, small steps, working sub-groups, flexible time, a multi-path approach, preventing regression, letting authority develop beyond expectations, provision for acceleration, and cushioning in terms of escape clauses if needed.

The guidelines from the literature do seem to "make sense" in relation to the case studies reviewed in this paper. Dow and Whitehead's emphasis on communication, time, role clarification, goals, feedback, and specific, yet flexible, implementation plans seems to be supported by cases analyzed.

Guidelines in addition to the preceding ones will be offered below for elaboration and/or emphasis in relation to the present climate for change in the schools of Saskatchewan.

1. Contingency Model

A contingency model for implementation is advocated. This approach is recommended by Sieber (1976-77) and the cases analyzed clearly indicate that what works in one situation will not likely succeed in another. A highly flexible, interpersonal approach with emphasis on goal clarity and organizational support is required. The curriculum implementation model currently being advocated by regional coordinators seems to be in keeping with this guideline. The model itself is an innovation and will require a carefully planned implementation process as well as adequate human and material resources.

2. Environment

The environment for change in schools of Saskatchewan must be studied in depth. Declining enrolments, fuel costs, the "new right," technological advances and increasing numbers of native students are having an obvious impact on most schools. The emerging priorities of both federal and provincial governments for job-oriented programs are going to have an effect on schools. Cultural and religious factors surface frequently. Beyond these considerations, and even more important in the view of many, are global developments and issues related to population, food supply, the environment, the economy and the need for peace.

We must assign personnel to a study of environmental factors and we must greatly improve linkage between schools and the environment.

Some writers such as Pincus and Williams (1979) remind us that environmental conditions change rapidly with a departure of leaders, an election, or adverse publicity. Case studies indicate that many innovations are perceived to have environmental support. This is likely

true for programs in special education, physical education, computers and alternative schools. What other innovations would be supported by our present school environment?

The Social Studies Task Force report indicates strong environmental support for new social studies programs that would emphasize a current world view and preparation for lifelong learning from the total community.

3. Educational Organizations

The nature of educational organizations needs to be thought about deeply. Corbett's (1980) description of loosely-coupled organizations seems to fit educational organizations in this province. The pocket veto seems to be used according to studies done earlier by this writer (Newton, 1968 and 1971) which reveal that teachers feel primarily inner-directed. Experience in schools seems to support the view that teachers do as they please and tenure protects them. Interviews with over a dozen local boards within the last two years indicate that this is a source of great frustration to parents. It may be that rural schools are more loosely coupled than urban schools but the point is that there is very little centralized control over what goes on in most classrooms. As Corbett points out, this makes high-scope change, such as the division system or Division III English almost impossible to implement.

Goodlad (1982) is pessimistic about the state of education. He claims that principals get caught up in routine, the departmental structure in high schools chops up the curriculum, teachers are more tied to content than to students, that teachers and principals rarely come together to examine total programs, and that teacher educators neglect the classroom environment in schools. He calls for a complete restructuring of schools.

There are some alternatives. If teachers are not able to assume a professional role with organizational support for time to read widely, think deeply and plan carefully, administrators should assume more of a professional leadership role and run a more tightly-coupled organization. If the group is not willing or able to perform a required task a directive approach is required. If teachers are able to assume a more professional role good changes would be implemented through rational-empirical and/or normative re-educative strategies and the administrator could play a facilitative role.

Although pupil-teacher ratios in many rural areas are much more favourable than they were ten years ago, day-to-day teaching still tends to consume all of a teacher's time and energy. Professional development, long range planning and individual attention to pupils do not seem to prosper in low enrolment situations. Multi-grades, additional pressures, and changing life styles (one-third of the teachers in one division either farm themselves or have a spouse who does) appear to block improved performance and curriculum implementation. There need to be new staffing patterns so that teachers have periods out of a classroom every five years and perhaps required professional development activities on a regular basis. A school division with 1200 pupils and 80 classroom teachers could assign only 70 teachers to classrooms by changing the pupil-teacher ratio from 15:1 to 17:1. The ten teachers could spend one term on their own professional development and the other term as consultants and/or change agents in the division. School organizations, in addition to more creative and functional staffing patterns, need to devote more attention to incentive systems, goal focus and role clarity. The need for these areas of emphasis is obvious from the case studies and the literature.

4. Leadership

Leadership of high calibre is required in order to implement the three preceding recommendations. The environment of the school must be assessed and the school must adapt to the environment at the same time as it develops from within. Who is there in education at the present time whose primary task is to relate schools effectively to a changing environment and to foster professional and organizational development? How much of an administrator's or consultant's time is devoted to maintenance and what portion is given to change?

As mentioned earlier, the Social Studies Task Force report recommended that school leaders devote increased time and energy to assessing and developing community environments. Pincus and Williams (1979) draw attention to the need for establishing what they term a "zone of protective tolerance" for an innovation. It is clear from the analysis of cases that barriers are seldom identified and planned for.

There is also an urgent need for leadership at the provincial level so that organizations involved in education can be effectively linked in the change process. Central-local relationships and processes for implementation need to be made explicit and planned for directly as soon as change is contemplated. Many advocate a provincial curriculum guide with provision for local development. Local development, however, just will not happen to any degree without provincial coordination and a support system. The Social Studies Task Force found that local groups need consultative services, opportunities for interaction with other developers, incentives, support and provision for publishing worthy materials for repeated use. The centralization-decentralization question seems to be an issue in this province well beyond taxation for education.

This issue, in terms of curriculum, must be confronted and consideration given to which aspects of curriculum are of such central importance that there should be no choice at the local level. Is learning to read in this category? Is learning about global issues such as food supply and disarmament?

As mentioned earlier, there are signs that the implementation process is beginning to receive more attention in Saskatchewan. A further step will be for the Department of Education, the S.T.F., the S.S.T.A. and the universities to plan in detail their related roles in the implementation of any particular change.

5. The Change Process

Selected guidelines that seem particularly important for the scene in Saskatchewan now are listed below.

A. Curriculum implementation needs to be planned over a 3-5 year period.

B. Professional development programs should be considered an integral part of implementation plans.

C. Survey feedback from teachers should be more fully utilized in order to identify needs at various stages in the process. Organizational diagnosis and problem solving are logical second steps.

D. Involvement of users is crucial in order to clarify meaning and to establish ownership. Curriculum development by teacher committees does not lessen the need for involvement because teachers see such committee members as external.

E. Care must be taken to define the level of implementation expected at a given time and specific strategies must be planned for each learning cycle to help users to move from one level to the next.

F. Implementation plans need to be based upon the users' world and provide for incentives, support, and opportunities for interaction.

G. In keeping with earlier guidelines about organizations and leadership, the role of administrators must be clear to all concerned.

H. There must be provision for organizations and individuals to develop from within as they adapt to external forces. Dalin (1978) calls this mutual adaptation and development.

I. Development of skills does not make sense until goals and roles are clear. Team building is not required unless people see that they need a team to do what could not be accomplished alone.

J. We should build less permanence into our organizations, curricula, and careers. The implementation process should enable people to gain in self-respect so that change and growth is seen as a normal part of living fully and being a professional.

It seems that guidelines for the "unfreezing" phase of the change process are the same as those required for organizational health and for the professional development of a teacher over an entire career. It does seem to come together. If a school is relatively healthy in terms of goal focus, and communication adequacy it is appropriate to proceed with detailed plans for curriculum implementation. If the school is not "ready", begin with survey feedback, and goal clarification.

Perhaps many leaders in education in Saskatchewan are perplexed, and even discouraged, by the shift of schools from relatively closed, rational systems to more open, political systems and the accompanying move from problem solving to dilemma managing. The challenge for educational institutions is to respond to these external (political) forces by being

less "set" and more dynamic -- there is the possibility that schools will become more vibrant and alive than ever before.

Although restructuring of education is called for in this paper, there is a firm foundation upon which to build. There is a fine tradition of cooperation among educational organizations in Saskatchewan. There are thousands of committed teachers and administrators. There are strong environmental factors that in the view of the writer would support bold and imaginative steps forward in education in Saskatchewan. The writer agrees with Fullan (1982, p. xi) who says, "Many of the solutions and the energies needed for widespread school change are already contained in our school systems."

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APPENDIX

TURBULENCE OVER PLACIDITY:
THE CHALLENGE OF THE ENVIRONMENT
FOR SCHOOL PLANNERS

A paper delivered to the Canadian Association
for the Study of Educational Administration,
Montreal, June 1980

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INTRODUCTION

My home town was named after Stranraer Scotland yet it included family names such as Olson, Cortus, Frechette, Balanger, Wiens, Krahn, Thomas, Wright, Charters, Sklerek, Cervanac and Wong. Like most prairie towns it was established in the early part of this century along a railway line and about twelve miles from neighboring villages on either side. A team of horses could deliver a wagon of grain to an elevator about six miles away and still return home the same day. At its peak, the village had three stores, four grain elevators, a hotel, two garages, a lumber yard, hardware, railway station, United church, hall, rink, and sports field. The sturdy, brick, three-room school had been constructed in 1928. For thirty years thereafter there were from two to eight pupils in each of the twelve grades. The highlight of the year for the community was the Christmas concert.

Stranraer today consists of a post-office, four grain elevators, a hall, a church and a boarded-up school. The garages, stores, railway station, lumber yard, and even stock yard have disappeared. There are some houses in the village and some new houses on farms that average over one thousand acres. Children travel by bus to a school in another village twelve miles to the west.

The story of Stranraer is typical of the happenings in rural Saskatchewan villages over the last fifty years. In the 1940's larger school units were introduced to the province and Stranraer became part of the Rosetown School Unit. In the 1950's bussing

became popular and schools in many villages were closed. In the 1960's school enrolments climbed but in the 1970's decline became a major concern to school officials. They saw the need to plan more effectively for education and to consider the school system in relation to the total environment. A request for assistance was made to our Department of Educational Administration.

Data were collected by department members in May and June of 1979. Procedures included questionnaires to all students in grade six and grade twelve and to the parents of these students. A structured interview was held with each principal and with at least one teacher from each school. The superintendent and board members were also interviewed. Board meeting minutes were examined, annual reports were collected, and enrolment projections were studied. An attempt was made through the questionaires and interviews to gather data about economic, demographic, cultural, social, political, and ideological as well as educational matters. To a limited extent researchers collected information from the general community through conversation, local newspapers and observation.

Rosetown School Division - 1980

Rosetown is a relatively prosperous, growing town in west central Saskatchewan. It is known as "The Heart of the Wheat Belt" and most people depend upon agriculture for their livelihood. Most of the people in the area are of Anglo-Saxon background and traditionally have been hard-working, church-going, and conservative.

In 1979 about two-thirds of the students were taking lessons in swimming, figure skating or music. Slightly more than half were in sports or church organizations and approximately one-third had travelled outside of Canada.

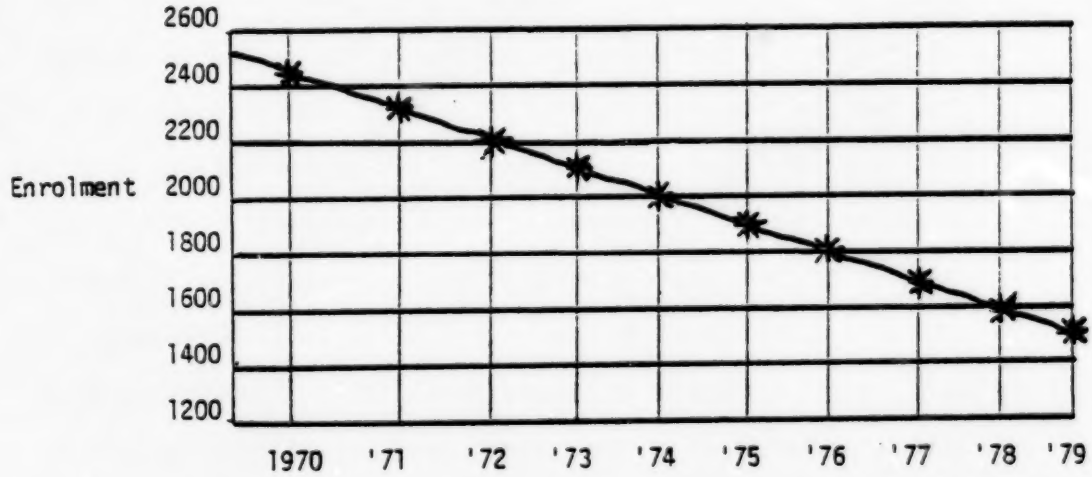
The writer has selected topics related to education in the Rosetown Division which seem to be of particular importance to our task today. The first of these is school enrolment.

Enrolment

Information is shown in table form below.

Table 1

Rosetwon School Division - Total Enrolment by Year



It is clear that a dramatic enrolment decline has taken place in the Rosetown Division. Between 1973 and 1978 this division experienced a 21.5% decline whereas enrolment in other rural areas in the province fell by 8.5%. Total provincial enrolment, including urban areas,

declined by 5.6% during the five year period. A further comparison reveals that the Rosetown Division has an enrolment change of -14.2% in grade 9,-13.8% in grade 10 and -19.0% in grade 11 whereas corresponding figures for the rural areas in the province are - 3.1% -6.4% and -9.7%. Enrolments in elementary school are stable as 80% of the grade 6 students had been in the same school since grade 1.

Finance

In 1979 expenditures in the Division were $3,802,200.00. Revenues were made up of $2,446,00 from local property taxes and $1,349,150 from provincial grants. Since the area has high assessment, a lower portion of total revenue comes from provincial grants than is the case in divisions with lower assessed property values. More specifically, in 1977, 60.4% of the revenue in the Rosetown Division was raised by local taxes, compared with an average of 37.8% for school divisions in the province. Expenditures in percentages for 1979 were as follows: administration 2.6, instruction 64.8, facilities 12.8, pupil transportation 17.3 and debt 2.1. Expenditure per pupil in 1979 was $2473.78 which was well above the average in the province. It is of interest that in that same year 66.6% of the students were bussed on an average of 4.71 miles per day.

Professional Staff

In general, the teachers in the Rosetown Division were better qualified, more experienced and therefore better paid than provincial

averages. In 1977-78 teachers on the average had 11.4 years of experience and were paid $17,946. It should be pointed out that between 1973 and 1978 when enrolments declined by 21.5% the professional staff was reduced by 4.5% from 110 to 105. Presently there are 99 teachers in the Division and the pupil-teacher ratio is 15.5.

During 1978-79 the Division Board appointed a principal from within the system to become Superintendent effective July 1, 1979.

Program

It is in Division IV (Grades 10, 11, 12) in Saskatchewan that most program options become available. At the present time, in addition to the regular academic program, typing and bookkeeping are offered in each of these grades. Home economics, drafting, woodwork, metal work and welding are also available. The regular program includes agriculture, French and band. The program has reamined relatively unchanged over the past ten years. Rosetown is one of the few divisions in the province not to include kindergartens as a regular part of the school program.

Facilities

There are thirteen schools in the Division in ten centers. Virtually all facilities have a gym, library, and extra space for special activities. Five of the schools have fewer than forty pupils. The oldest school was constructed in 1954 and the newest in 1965.

In summary, it seems fair to say that the Rosetown Division is blessed with people willing and able to pay for education. There are serious problems related to declining enrolments, small schools, and static programs.

Rosetown School Division - The Future

Information from a sample of ninety-five parents regarding schools in the future is best summarized in point form.

1. Approximately 9 out of 10 parents have positive feelings about schools as they are.
2. Compared to today's schools, schools in the future should be about the same according to 23 parents, should change in the opinion of 35, and 19 were unable to decide.
3. At least 8 out of 10 parents feel that schools in the future should place more emphasis on basic skills, learning to get along with people who are "different", developing good character and self-respect, and learning to examine and use information.
4. In the future there should be more courses related to being a manager of money, property and resources and to Canadian studies in the opinion of at least 70% of the parents.
5. Six of ten parents say that the following aspects of program should receive more attention in the future:
   - appreciation of beauty and culture,
   - drug, alcohol and sex education,
   - job skills,

- the Lord's Prayer and national anthem, and
- discipline.

6. When asked if schools in the future should provide more opportunity for pupils to learn a second language of the parents' choice 48.2% say "yes", 27.1% say "no", and 24.7% are undecided.

Other aspirations for and predictions of the future were obtained from students, school board members, teachers, and administrators. A tri-university conference regarding education in Alberta in the 1980's was attended by two team members. Statements from governmental, business and academic leaders about the future of Saskatchewan were also taken into account in the preparation of scenarios.

Scenario I - "As Is"

On the preceding pages the scene in the Rosetown Division in 1979 has been outlined. We may assume no significant change in the economic base, enrolment trends, grant structure, inflation, and pupil-teacher ratio. We may also assume that wishes of parents will continue to be a major determinant of school policy. Given these assumptions, by 1984 enrolments will have declined by 200 to about 1300 pupils. The teaching force will be reduced by thirteen to eighty-six in order to maintain the pupil-teacher ratio at 15.5. All schools in operation in 1979 will remain open, and all programs will be maintained. More teachers will need to move outside of areas of specialization and work in multi-grade classrooms. The reduction in staff mentioned above, together with an

increase of 7 mills will maintain a balanced budget.

By the end of the 1980's enrolment will show a slight increase of 26 pupils and two teachers will be added to the staff.

Scenario II - "Optimistic"

Changes in the economy of the Rosetown Division are feasible during the 1980's in terms of increased farm income and the development of the heavy oil industry on the west side of the Division. These changes are beyond the control of school officials but one other possible development is not: that is, the implementation of program changes suggested by parents and reported earlier in this paper. We may assume that the three features described above do take place and also that some flexibility in staffing is possible.

By 1984 an influx of oil workers and a change in policy regarding kindergartens has resulted in an enrolment at the 1979 level. Staffing numbers have been maintained and in addition two new positions have been established: a school community co-ordinator in Rosetown and a program consultant to work out of the central office. Increases in assessment have made these changes possible since facilities are still adequate and costs for the school community coordinator are shared with the town and the Community College.

Growing enrolment, a commitment to professional development of teachers, and a strong desire to involve communities in effective

program change have resulted in a new school in Dodsland, three program consultants, released time for principals and planning time for every teacher by 1990.

Scenario III - Pessimistic

A drop in farm income and greatly increased energy costs may create severe problems in the Rosetown Division during the 1980's. If energy costs double by 1984 as predicted in the November 1979 issue of Macleans, conveyance of pupils and heating of buildings will be a major cost. Enrolment declines are even more acute due to people leaving farm communities and seeking livelihood in industrial and mining centers.

By 1984 Howard Powell, Herschel, Darcy and Brock schools have been closed. Enrolments have declined to 1200 and eighteen teachers have become redundant. In order to reduce fuel costs a four day school week is being considered. Provincial grants have increased as more money from oil and mining revenues is allocated to education.

Readers of the April, 1989, copy of the "Rosetown Eagle" are astonished to see the headline "Winter School Holiday Adopted." They read on to note that the Board has decided, under a change in provincial legislation, to keep schools open during the summer and to close schools for January and February. The winter holiday plus the four-day attendance week adopted in 1986 is expected to reduce energy costs by 20% and enable the Board to balance the budget for 1989-90.

DISCUSSION

Per Dalin, the founder of an international organization to study change in education states:

> We have failed to view the school and the educational process as part of a complex social system. We have failed to understand and take into account the complex interdependence among the various parts of the system. We have not established a 'systemic view' of education as a social system. (1978, p. 8).

In 1967 Watson noted that the major impetus for change in organizations is from the outside (p. 21). More recently, Morrish in examining factors which affect change, claims that change is dependent very much on the milieu in which it occurs. (1976, p. 31). It seems to be generally agreed that in order to understand schools as they are and to plan for schooling, schools must be considered in relation to the total environment. In terms of considering the total context, the Management in the 1980's project appears sound although much more must be done in developing and understanding linkages between the school system and the environment.

A major reference for the writer in considering systems planning has been chapter seven in The Planning of Change, Third Edition, edited by Bennis and others. Friedmann, for example, offers a model of transactive planning in which planners contribute concepts, theory, analysis, processed knowledge, new perspectives and systematic search procedures. (1976, p. 303). Clients, according to his model, contribute intimate knowledge of the context, realistic alternatives, norms, priorities, feasibility judgments and operational details

(1976, p. 303). The Friedmann model describes quite accurately the parts played by our faculty as planners and by people in the Rosetown Division as clients.

The environment in the Rosetown Division is stable in terms of mobility of people, economic base and value system. It is also marked by relative ethnic homogeneity. Terreberry, however, would describe the environment as turbulent because the accelerating rate and complexity of interactive effects of systems exceeds the capacity of any one system to predict and, hence control, conseq-uences of their actions. (1976, p. 180). School officials do seem to feel relatively powerless in the light of the interactive effects of component political, economic, and social systems. As the writer sees the situation, the environment is turbulent at high levels yet placid and clustered, to use terms of Terreberry again, at the community level. In the opinion of Baldridge and Burnham, the clustered, placid environment is a problem in that such situations do not provide an impetus for change. They report:

> a large, complex organization with a heterogeneous environment is more likely to adopt innovations than a small, simple organization with a relatively stable, homogeneous environment (1975, p. 175).

One wonders, therefore, where the impetus for change is to arise in the small schools of the quiet communities of the Rosetown Division.

There is another complication concerning the environment within the system that can best be described by Gibb's ten-point

scale of environmental quality. (1978, p. 120). The system, in the perception of the writer, is in phase one or two labelled as punitive or autocratic with the latter described as a situation in which power and authority are used to maintain control and order. (1978, p. 121). This low level of trust or environmental quality is the result of the high-handed method by which the Board made six staff cuts in 1979.

The complexity of the situation in this school division is almost overwhelming and yet, in comparison to many school jurisdictions, it should be relatively simple. No doubt leadership of the highest calibre is required within the system. It is the conviction of the writer that both organizations and individuals must change in an organizational development process. The OD readiness checklist suggested by Pfeiffer and Jones would need to be kept in mind. (1978, p. 186). When the system was deemed ready the conclusion of Fullan and Miles would provide a useful guideline:

> ...so we conclude that OD <u>can</u> be beneficial to schools. Whether it is or not seems to depend a great deal on the attitude and support of top administration, the establishment of strong internal OD consultants (possibly in line positions), the selective use of external consultants, and a deliberate, explicit approach that combines task, structural, and socio-emotional focuses in a system-oriented framework. (1978, p. 173).

Scenario construction in the opinion of the writer is a promising approach for educational planning in complex environments. Lay leaders must realize that they do have an influence over and

a choice among alternative futures. Professional leaders must devote an increased amount of effort toward helping school trustees to visualize alternative futures in education and to choose among them. If these alternatives are not described, lay people know schools to a limited extent only as they are and as they have been. When disenchanted with schools today, is it any wonder that we hear a cry for <u>back</u> to the basics or <u>back</u> to the little red school house? Scenario construction is an exciting and profitable method for looking ahead to what schools might be. The need for this planning has never been greater as in jurisdictions such as Rosetown where schools must respond to turbulence over placidity in the environment. In the physical world we use lightning rods to channel charges and we seed clouds with condensation nuclei to increase the chances of nourishing showers. The challenge to educational planners is to provide channels and nuclei so that the school environment does in fact nourish the system.

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